THE VETERINARY JOURNAL

AND

Annals of Comparative Pathology.

JUNE, 1879.

SCROFULA AND TUBERCULOSIS IN CATTLE.

(*Continued from page* 237.)

BY G. GRAY, M.R.C.V.S., BAKEWELL, DERBYSHIRE.

WHETHER the milk of animals suffering from the disease really contains the virus of tubercle has not as yet been well authenticated. However, with the knowledge we possess, it must be looked upon with the gravest suspicion. Quite recently I had an opportunity of examining two calves which were suckled by a cow while suffering from acute Tuberculosis. I saw the cow a few days before she died, when the calves had just been weaned. She was three years old, cross-bred, in the first period of lactation, and was extremely emaciated—Diarrhœa having set in, which soon terminated life. The calves up to this time have exhibited no signs of disease; they are in good condition, but look small for their age.

Animals with a hereditary taint have very frequently peculiarities in their physical conformation whereby they can be readily distinguished from those of a sound constitution. With such animals, when moderately well attended to when young, the bony framework of the body, and especially the long bones, will grow fast; the animal will be big, or rather stand high for its age. The limbs are long, knees and hocks inclining inwards, the body long, with flat ribs and narrow chest, a long narrow face, with very often a slight prominence of the nasal bones. These are mostly met with among cross-bred stock, and are very common

on dairy farms, where little attention is paid to physical conformation. Pure bred stock suffer less in their conformation; but successive generations from the same breed tainted with the disease will ultimately become affected, they often falling off in physical development. A cold atmosphere is a very common cause of Tuberculosis. I have had ample opportunity of substantiating this fact in Derbyshire, and it certainly accounts for the disease being so prevalent in this neighbourhood. On the high-lying land of this county, which is much exposed and poor in shelter, cattle suffer much from the ravages of the malady, and more so in damp than dry seasons; so that the addition of moisture in the atmosphere greatly aggravates the cause. When the atmosphere is cold, and much charged with moisture, I have observed many cases occurring of tubercular inflammation of the lungs, pleura and peritonum. I have also noticed that when dry, cold, easterly winds prevail, Tubercular Bronchitis, often accompanied with Laryngitis, will ensue. Soils situated upon the shale exert a peculiar influence in the production of this malady; the herbage, and even the water, producing Chronic Dyspepsia, which induces the cachexia so conducive to the formation of tubercle. The water at one time was looked upon as the sole cause, and for this reason was cut off, and surface water substituted. This has greatly diminished the influence of, but not altogether extirpated the cause; for in wet seasons it will be found to operate strongly, showing that the herbage has much to do with the production of this phenomenon. The hay will have a similar effect upon cattle in winter, when they are tied up, as it constitutes their sole *pabulum.*

As I have already stated, Scrofula may make its appearance at any period of life; but most frequently it is met with about the period the body has accomplished its growth—from two to four years of age. The first period of pregnancy, of parturition and of lactation (which generally occurs when the animal is from two to four years old), are the most trying periods for an animal predisposed; and the first signs and progress of the disease can often be chronicled from either of these periods.

Crowded, badly drained and ventilated stables, in town and even country dairies, have very great influence in the production

of Phthisis—the buildings being frequently inadequate for the number of cows kept, and sanitary measures are often sadly neglected. In addition to these, the food that dairy cows generally receive is not always calculated to maintain the equilibrium of health. Insufficient food and shelter often produce this malady at an early age. It is customary with many farmers to keep their young stock out in winter, giving them little beyond the scanty herbage they gather; and many of them have not even a shed to shelter in from inclement weather. Such a practice, in this county at least, is objectionable, and calculated to sap the constitutions of growing animals; well-marked symptoms of Scrofula often appearing before they are many months old, and when selected for dairy purposes they will succumb to the disease at an early date. Cows and bulls are more subject to the disease than emasculated animals; many of the former succumb to the disease, or are far advanced in it, before they reach the age of three years, while the latter rarely exhibit any symptoms during life, as they are generally slaughtered at three, and often at two years old. Isolated deposits of tubercle are sometimes found in the lungs and liver, but the virus does not appear to act so energetically in them as in the cow and bull.

Certain breeds are more predisposed to the disease than others, and none more so than the pure and cross shorthorn, while few appear to resist the influences which lead to the production of the malady like the Scotch kyloe. Although large numbers of these are kept in this neighbourhood, I have never encountered a case of Scrofula among them.

There is little doubt that much depends upon the external influences and surroundings in inducing the disease—a cold, damp atmosphere, with innutritious food, playing a very important part in its production.

Symptoms.—The symptoms and progress of the disease will much depend upon the organs involved. The proneness to the formation of tubercle is not uniformly the same at all periods of life, nor in all parts of the body. In young animals the disease is more acute, and the parts oftenest attacked are the cervical, bronchial, and mesenteric glands, peritoneum, pleura and lungs;

while in old animals the disease is mostly chronic, and often confined to the lungs and liver. The premonitory symptoms are often not well marked, and in some cases they are entirely absent, especially in the chronic form of the disease, which mostly occurs in aged animals. I have witnessed, on several occasions, deposits in the lungs of animals (that have been slaughtered or have died from other maladies), that never at any time of life exhibited the slightest indications of the presence of the disease, but were always healthy and in good condition. There are, however, in general, well-marked premonitory symptoms which usher in the cachexia that precedes and accompanies the formation of tubercle. Malnutrition, of more or less intensity, exists for an indefinite period prior to the detection of local lesions; this is manifested by an altered and impaired condition of the secretions of the body. The hair loses its bloom and lustre, and if in winter, falls off from the persistent attack of parasites, the presence of which often indicates a vitiated condition of the body. The skin becomes dry, scaly, and dirty, and assumes a yellowish hue. If in milk, the secretion may continue undiminished for a time, but will be found to be impaired in quality, becoming thin and watery, of a bluish tint, with a deficiency of the nitrogenous constituents. There may be no tendency to a loss of condition for a time, and although the quantity, and also the quality of the food are increased, the results are negative, as whatever may be devoured by the victim does not improve the condition. The appetite may remain unimpaired for a time, and any kind of food will be readily partaken of; though in some instances it is morbidly increased. This, however, is rarely the case with young animals. When the disease occurs in young animals, the growth is generally retarded, and in some cases entirely arrested. A case in point came under my notice some time ago, which I think is worthy of note. The subject of this case was a pedigree shorthorn bull calf, bred from high blood. His sire was a remarkably fine animal, and cost the owner a large sum of money when but a calf, as he was also of high blood. He suffered from an acute attack of Tubercular Bronchitis when two years old, which terminated in Tubercular Phthisis—the "dry" or "calcareous" form of the disease, as Mr. Fleming has termed it in his admirable

"Manual of Veterinary Sanitary Science and Police." I attended him throughout his illness, but he was subsequently cast for stud purposes, in consequence, and disposed of to the butchur. The dam was equally well bred, and likewise suffered from the same form of the disease. She had to be disposed of in a similar manner, and this was the last calf she bore. The colour of the sire and dam was roan, the calf white. My attention was first called to him when about twelve months old. Knowing well his ancestral history, I inquired as to the state of his health prior to my visit, and this was reported to be good up to about ten months old, when he had grown and thriven well; but latterly he had begun to fall off, and looked unhealthy in his coat, though the appetite was good and he was in high condition. The symptoms present were a dry, harsh coat, skin dirty, scabby, and yellow—the latter appeared conspicuously so, owing to his colour—bowels constipated with tympanitis. No organic disease could be detected, but his general aspect certainly betrayed "Scrofula incipience." As he was suffering from indigestion, with torpidity of the liver, I prescribed accordingly, which afforded relief. During the remainder of his life he was much troubled with indigestion, and latterly the appetite became capricious. He retained his condition, which was good to begin with, as he had always been well kept, but the growth of the body was completely arrested—he did not grow after his first attack, when he was ten months old. I saw him frequently and prescribed occasionally for indigestion, which he suffered much from, but not acutely. Although no appreciable thoracic complications were present, it was evident that Scrofula was seriously involving the abdominal organs. Inappetence, dyspepsia, malnutrition, and lassitude were daily increasing. It was now apparent he would do no good, so he was disposed of to the butcher when twenty-one months old, and for size he would have passed for ten months old. The butcher thought he had bought a calf, but was afterwards surprised to find he had shed his central incisor teeth. I learned that the abdominal organs were "graped" and grown together, but the lungs and heart were healthy. I was disappointed I had not an opportunity of making a *post-mortem* examination.

(To be continued.)

HEMIPLEGIA IN A YEARLING FILLY.

BY T. H. MERRICK, M.R.C.V.S., KETTERING.

EARLY on the morning of March 31st last, I was hurriedly summoned to attend at Weekley, to see a yearling cart filly, the property of Mr. C. Bayes, which he was afraid would be dead before I could get there. On arrival I found the animal lying in a straw yard, all four limbs fully extended, head somewhat drawn to the right side, left ear drooping, both eyes perfectly blind, and the *cartilago nictitans* protruding, similar to what is seen in a case of Tetanus. The history of the case I found to be as follows:—The filly was lying out with three others, and came into the yard to have some hay, apparently in perfect health. While feeding, however, the man who attended to her told me that she fell down, to all appearance as if in a fit. I had her removed into a hovel close to, and after giving a mild aperient, ordered her head to be constantly bathed with cold water, which seemed to much relieve and tranquillize her. The pulse was of moderate strength, about 60 to the minute, the mucous membranes were slightly injected, and the extremities were warm. She would endeavour to eat some hay if offered to her, but appeared to have lost the use of the left side of her mouth, which was slightly drawn.

April 1st.—The filly still lay in the same position, but occasionally struggled violently to rise; pulse 84, mucous membranes much injected. Her bowels had responded to the aperient administered. Applied a strong blister to the poll. Saw her again later in the day, and found that after much struggling she had managed to get up, but she was very infirm, with her head drawn very much to the right side, still perfectly blind, and the left ear quite pendulous. She could eat hay slowly and drank freely; pulse 72. Being very awkward to do anything with, and not wishing to upset her, I simply gave her three times a day, Tr. Aconit. gtt., 7, and Pulv. Pot. Chlor. oz. 2. mixed in her drinking water, and ordered her sloppy diet.

April 2nd.—The filly was certainly improved, not being so infirm, and the pulse had fallen to 60; the mucous membranes were of a better colour.

April 3rd.—The sight of right eye has returned; pulse still about 60; continued same treatment.

April 5th.—The filly could now see perfectly well, although the head was still drawn to the right side and the left ear drooped. Her pulse having fallen to 48, I ordered her a tonic powder, with Strychnia, grs. 2., twice daily.

April 21st.—Saw the filly for the first time since the 5th inst. The owner had turned her out with her former companions, and she appeared to be perfectly free of any evil results from the attack.

I thought the foregoing remarks might interest some of the readers of the VETERINARY JOURNAL, more particularly as I notice that Professor Williams, in his work on "Veterinary Medicine," says that Hemiplegia is not only very rare amongst the lower animals, but that it generally proves fatal.

GLANDERS IN INDIA.

BY J. MILLS, M.R.C.V.S., ROYAL HORSE ARTILLERY.

SEVERAL articles having appeared in the VETERINARY JOURNAL relative to Glanders in India, and feeling deeply interested in the subject, I desire to bring to notice the particulars of an outbreak which took place amongst the horses of the battery under my charge at Meean Meer.

We marched out from Umballa on the 7th October, 1878 (the horses were then apparently all in a healthy condition), arriving at Meean Meer on the 26th of the same month. On the 4th November, just nine days after our arrival, acute Glanders made its appearance.

My first endeavour, naturally, was to find out the cause. I was confident that it was not of spontaneous origin, as the surroundings did not indicate anything of the kind; on the contrary, the horses were in good condition before starting, and during the whole march their condition was maintained, the forage (grain, bran and grass) being of good quality, with the exception of the grass, which on a few occasions was rank and dry; but, on the whole, a fair supply of it was obtainable. At

each camp there was an ample supply of good well water, though in some instances it was "brackish."

The horses were watered from troughs used by all animals passing. They were well groomed and clothed; in fact, the stable management was everything that could be desired; therefore I could not trace it to a want of care in that direction.

The morning being cool, the marches were performed without much exertion, the average distance of each march only being about twelve miles.

Knowing before starting from Umballa that Glanders was prevalent in the Sarahimpoor district, and although we were not to march through that district, still I determined on exercising every precaution, as the disease was just as likely to be in existence on the roads throughout Sirhind and the Punjab as anywhere else: which unfortunately was the case, as we shall afterwards see.

Before the battery reached any of the camps, I rode on and inspected all the animals in the "Serai" and "Bayaar." The water-trough was carefully cleaned out before the horses were allowed to drink. I inspected all droves of horses or ponies that I could see on the road, but detected nothing until we came to a place called Bara, about half way between Umballa and Meean Meer, where I saw a pony belonging to a dealer which slightly aroused my suspicions, and from that day I kept a close watch on the horses of the battery.

On the 1st Nov., I noticed a chestnut mare looking d[illegible]l, feverish, and not feeding. She was admitted to the hospital, where she was carefully looked after, and every sanitary precaution taken. On the morning of the 3rd there was slight enlargement of the submaxillary glands. The Schneiderian membrane, more especially on the left side, appeared inflamed in patches, and, as I thought, becoming ulcerated in one spot just inside the wing of the nostril—but it was a most difficult matter to get near her head to make a minute examination, as she was of a most nervous temperament; therefore I decided to wait another day before giving a definite opinion. Next day (the 4th), after some trouble, I got a glimpse of the membrane, on which was situated a well-marked chancrous ulcer, so distinctive

of that loathsome malady; also a slight discharge from the nose, and the submaxillary glands were perceptibly larger than on the previous day. I could see the inguinal glands were enlarged, with stiffness in her gait behind.

The matter was at once reported, a committee formed, and the mare destroyed forthwith. *Post-mortem* examination fifteen minutes after death revealed: Fairly well nourished body. On opening the nasal chambers the mucous membrane showed signs of intense inflammation having existed, with a row of very small but well-defined ulcers on the surface, and on the inside of the wing there was one about the size of a threepenny piece. On cutting into the submaxillary glands, I found they contained a small quantity of sanious matter. All the internal organs, both of the thorax and abdomen, were highly inflamed.

The surface of the lungs and liver presented several nodular bodies in a state of formation. The lymphatic system throughout the whole body was in a state of acute inflammation, and here and there enlarged ducts and glands were to be seen.

I have given the case of the chestnut mare as a typical one, and as all the others presented much the same appearance, it would therefore be useless for me to give them in detail.

On the 5th November the disease made its appearance amongst the "grass-cutters'" ponies, and in a few days several of them had to be destroyed.

The precautionary measures which were adopted both with the horses of the battery and the grass-cutters' ponies, after the appearance of the first case, were as follows:—The suspected animal was at once isolated, and the others which stood next it were also isolated, both from the animal suspected and the other horses of the battery, their litter burnt, and all the stable gear thoroughly disinfected. The native groom (Sāees) was isolated as well, and received strict orders that he was not to leave his post day or night until the termination of the case was apparent. The carcases of the animals destroyed were deposited in a grave ten feet deep, the skin cut up, and a large quantity of quick lime thrown in with them—in fact every conceivable sanitary measure was put into force to prevent the spread of the disease.

When I left Meean Meer on the 6th December for England,

just about a month from the first outbreak, something like 2¼ per cent. on the total number of horses in the battery had been destroyed.

Amongst the grass-cutters' ponies the per-centage of outbreak was about five, or a little over double that of the horses; but this only goes to prove that from the poor condition they generally are in, they become good receptacles for the poison of Glanders or any other disease.

I have not brought this outbreak to the notice of the readers of the VETERINARY JOURNAL with a view of giving a communication on the malady, as no doubt it is familiar to most of us; but simply to show that the disease is, from what we have seen, just as likely to become a common one in India as it is at home, and points out the necessity there is for proper sanitary surveillance with regard to contagious diseases amongst animals. There is only one thing to be done to prevent its spread—and, if not actually stamping it out, to, at least, keep it in abeyance—and that is the placing of each district under strict veterinary supervision, with the assistance of the police.

But in such a country as India the enforcement of any sanitary law is attended with the utmost difficulty, principally from the dread with which the natives look on doing anything out of their usual customs of life, and they will do all in their power to thwart you in your endeavours to carry it out.

As an instance of this:—While the disease was in existence at Meean Meer, and after a few of the ponies had been shot, another one, with the grass-cutter, was isolated, and he received strict orders not to leave the spot; but, alas! next day he and his pony were *non est*, he had fled in the night no one knew where; and when I left some days afterwards he had not been heard of. Of course, there was no actual guarantee that the animal was really glandered, and I sincerely hope it was not; but at the same time the appearance it presented warranted its separation. Well, again, on the other hand, supposing it turned out to be suffering from the disease, the consequences are simply deplorable—in fact, a better means of spreading it throughout the country could not be conceived than this wretch wandering wherever he pleased, contaminating everything he came across.

The same is equally applicable to the dealer who passed us at Baro—in fact, his case was a worse one than the grass-cutter, as his life is essentially a moving one, and so long as such causes as these are in existence the effect must be disastrous.

ON THE DETENTION IN THE UTERUS OF THE ŒSTRAL PRODUCTS IN THE LOWER ANIMALS.

BY A. E. MACGILLIVRAY, V.S., BANFF, N.B.

THIS is a matter of more importance to the veterinary profession and their clients, than may at first seem apparent; and as Mr. George Gray, of Bakewell, in last VETERINARY JOURNAL, has been pleased to open up the subject, and has propounded certain queries as to the same, I intend making a few practical observations on this interesting topic.

Mr. Gray's queries are:—(1) Does the catamenia, when retained, owing to impervious os or other causes, remain in the uterus unaltered, or does it undergo any change? (2) Does the continued presence of the catamenia in the uterus excite the mucous membrane to increased activity?

The answer to the second query will depend on how the first is disposed of; for it cannot be denied that, if the retained œstral products (*catamenia*, so called) remain unaltered and undergo no change of any sort, the mucous membrane of the organ where it is both secreted and imprisoned cannot be expected to become unusually excited. But, on the other hand, if the imprisoned œstral products undergo any change, either physically or chemically, through becoming disorganised or disintegrated—as all natural emissions or secretions very quickly become if retained within, and not functionally monopolised by, the active animal economy—then the mucous membrane of the uterus would undoubtedly become excited to an undue, and perhaps diseased activity.

In Mr. Gray's case, I should say that the imprisoned excreta (catamenia or œstral product) had evidently begun to undergo a change, and hence the increased vascularity and epithelial denudation in the mucous coat of the cornua uteri. It is a pity Mr.

Gray did not say whether or not the imprisoned fluid had any bad smell.

No doubt the existence of sanguineous catamenia in the lower animals is still a *questio vexata* in professional circles, and a matter of no small amount of discussion and debate; and it must be allowed that a case such as Mr. Gray's does not do much towards proving this catamenial analogy in all animals—human and brute. Here there was found a "yellowish-looking fluid," which resembled "yeast mixed with beer;" no signs of anything like blood; and it is very likely that to this absence of the sanguineous element we owe the absence of smell, the healthy state of the mucous coat, and the light colour.

It may well be asked, however, whether this "yellowish-looking fluid" is at all compatible with the idea of its being retained catamenia? A query which can at once be answered in the affirmative, and that for the following reasons:—

In Mr. Gray's case the heifer was only twenty months old, and had very likely but seldom been in heat (menstruated?)—certainly not so often as he says. Now, in the young human female (in which, in adult life, sanguine catameniæ are unquestionably the rule), *very often* at the beginning of menstruation, and for several succeeding menstruations, the catamenia consists of a "serous fluid slightly red," and sometimes without even the "slightly red"; and it is only after the lapse of several "periods" that the real sanguineous catamenia appears. Hence it may safely be argued that the absence of a "slightly red" tinge in the imprisoned fluid in this *young heifer*, is no tenable reason to lead us to suppose that it was not real œstral products (catamenia?), with perhaps a slight additional abnormally secreted fluid from the partially diseased uterus.

I am not at all inclined to allow that Scrofula had anything to do with the production of the fluid in this case; the fluid was there simply because its means of exit was shut up—in fact, had never been open; for it seems to have been a case of congenitally occluded os uteri. Besides, I can neither see the meaning nor admit the truth of Mr. Gray's statement, that "scrofulous matter may be formed without any accompanying lesion." But as this is foreign to our subject, I shall leave it to

Mr. Gray to explain what part of the animal economy may become the seat of a scrofulous deposit without any accompanying lesion.

In a very recently published work (January, 1879), embracing the entire range of obstetrical learning, I find it stated that the true source of the catamenia is now believed to be the cavity of the body of the uterus, which becomes congested, its vessels gorged with blood, and its mucous membrane swollen and sometimes partly shed. This excited, congested, and swollen state of the uterus owes its origin to previously existing *ovular maturation;* one or more ovules ripen every month, these excite ovarian congestion, and subsequently, from sympathy, the Fallopian tubes and uterus become congested. In fact, to quote this latest authority, "it is thoroughly recognised now that the ovaries are indispensable to, and the mainspring of, the menstrual flow." This has been verified by actual observation in the human female.

As to the lower animals, at pp. 56, 57, 58, of that remarkably comprehensive work, Fleming's "Veterinary Obstetrics," the reader will find a description of phenomena quite analogous to the above. And I am happy to be able to quote a case confirming Mr. Fleming's statements, as to the condition of the uterus in cows during œstrum. On the 16th March, 1877, I was consulted in reference to a valuable shorthorn cow with a bad cough. On examination I found her far gone in Pulmonary Tuberculosis; and, as she was in fair condition, I advised her slaughter. The owner demurred, and said he would like another calf out of her; the cattleman then remarked that she was *just in heat,* and would be ready for service next day. Owing to my representations, however, she was slaughtered next day, and I was only too glad to attend and make an examination of the uterus. I found ovaries and uterus congested—the mucous membrane of the latter being loose and easily scraped off—with congestion beneath; and about, or over, two ounces of a transparent blood-tinged fluid. This fluid was quite clear and purplish-looking, rather than red, but on exposure it became redder. I tried to get a phial to preserve part of it, but failed. The os uteri was closely shut, so that it would have been another

day before the fluid made its exit, by which time it would likely have been more abundant and deeper in colour.

Returning, however, to the question of change or no change in imprisoned catamenia, I am inclined to assert, from experience, that a change generally does occur, more especially if blood be present, and the greater the amount of the latter the more speedy and deleterious will the change and its effects prove; for blood once withdrawn from the circulation, if retained in any organ or cavity, very quickly becomes disintegrated and putrid, and so gives rise to much irritation, which irritation is followed by increased secretion of the irritated surface; and hence the *immense* quantities of abominally smelling sero-sanguineous collections often found in these isolated *uteri!*

In an article written by me, which appeared in the *Veterinarian* for November, 1872, I mentioned this retention of the œstral products as one of the causes of Uterine Leucorrhœa. Now, Uterine Leucorrhœa is merely an abnormal secretion from the diseased mucous membrane of the uterus; which diseased state is brought about (in instances such as those under discussion) by the irritative and acrid action of the *changed* œstral products. In the young human female who has never menstruated, this Leucorrhœa is *often* the precursor of true catamenia; and this, without doubt, from like reasons as in our patients—the lower animals—namely, owing to some obstruction or occlusion about the os uteri or vagina or hymen, the catamenia are retained, and by irritation produce a diseased secretion of a profuse description from the mucous membrane, which, if it does not of itself burst through the obstruction or occlusion, must be evacuated by medical aid. A great many very untoward cases of this sort occur in medical practice.

On the 9th May, 1878, I was asked to attend a young pure shorthorn heifer in calving. On my arrival, I found that an empiric had preceded me. He had examined the heifer and said her "passage" was not properly expanded, but expected the same to be relaxed in four or five hours, at which time he would return and extract the calf, *which he could easily feel!* The quey had pretty severe pains; so I at once proceeded to examine her, and found the passage, from the *ostium vaginæ* inward, quite im-

pervious. This startled me a good deal; after considering for a little, however, I explored *per rectum*, and found the uterus well distended, but could discover *no calf!* I then resolved to open up the vagina as gently as possible; this I shortly accomplished. The os uteri was quite distended, the occlusion not extending so far inward. About a gallon of a thick purple-coloured fluid, almost odourless, escaped! The owner now volunteered the information that he was not certain whether the heifer was served with the bull or not; very likely not, I should say. I had the uterus several times syringed out with tepid water and carbolic acid, and the quey became all right.

In this case the vaginal adhesions were not very firm; so that I was not inclined to suppose that the occlusion was congenital. The absence of any disagreeable smell also led me to form a favourable prognosis; and I was right, for the quey continued healthy, and had her usual "periods."

In the VETERINARY JOURNAL for March, 1877, I quoted an analogous case in a two-year-old filly; this filly also came all right in the end, had her regular "periods," and is this season in foal!

I cannot conclude this communication without again adverting to the importance of this subject, alike to the profession and their clients. Referring only to the last two cases, we may see the value of a thorough knowledge of its nature. Here, it will be observed, two valuable animals were saved and rendered fit to "propagate their species," after both had suffered from "Detention of the œstral products (catamenia) in Utero," and that to such an extent as, if left alone, they would undoubtedly have succumbed like many more.

A case in point strikes me. In August last, a friend of mine consulted me in reference to a favourite pure polled-heifer, which, from the description given me, I had no doubt was suffering from the effects of retained catamenia. My advice was to get the attending V.S. to open up the passage and allow the imprisoned fluid to escape, and follow this up with tepid water and carbolic acid repeatedly injected into the uterus. If this was not considered practicable, as the heifer was prime fat, I advised her to be slaughtered. She was allowed to die!

INDIAN VETERINARY NOTES.

BY CAPTAIN M. HORACE HAYES, "THE BUFFS," MEERUT.
AUTHOR OF "VETERINARY NOTES FOR HORSE OWNERS," ETC.

I BEG to submit to the readers of the VETERINARY JOURNAL the following notes, in the hope that they may prove of some interest:—

No. 1.—*On "Split Pastern."*

Last year, at the Cachar races, a pony pulled up dead lame on the near fore-leg after winning a race. The animal was taken to my stable, which was within a hundred and fifty yards of the winning-post, and as there was no veterinary surgeon in the district, I was asked to treat him. I found the foot flexed, the toe only resting on the ground. Great tenderness was evinced on pressure being applied to the fetlock and pastern, but I could detect no lesion of the structures. I gave a dose of physic, had warm fomentations applied, and slings not being available, I bedded down—following Professor Williams' advice—with an ample supply of sawdust.

Next morning the limb, from the knee downwards, was much swollen. I observed that the swelling about the pastern was tense and uniform, giving it a rounded appearance; so that, on manipulation, I could not trace any inequalities on the posterior surface of the *os suffraginis;* hence I concluded that there was a vertical fracture of that bone. With rest and cooling treatment, the pony in twelve weeks' time was able to walk comparatively sound. By that time all the swelling above the fetlock had disappeared, though the pastern still presented an abnormally rounded appearance, and was considerably thicker than its fellow. At this period the pony was seized with an attack of Anthrax and died. On dissecting out the pastern bones, I found that my diagnosis was correct. The fracture occurred directly through the groove that lies between the two glenoid cavities on the superior extremity of the *os suffraginis*, and proceeding vertically downwards, passed through the external condyle of the inferior extremity. There was hardly any displacement. A large

amount of provisional callus was thrown out, though it did not in any way interfere with the articulation.

No. 2.—*On "Split Heels."*

I use the above term, in default of a better, to signify division of the hoof, commencing on the sole between the heels and the frog, and terminating on the posterior aspect of the coronary band, as a result of concussion caused by galloping on hard ground.

I have never seen a description of this accident in any veterinary work, nor have I met with a case of it until within the last year.

Last October, during the Dehra Doon race-meeting, Mr. Ryder, who trains for Lord William Beresford, showed me the Australian race-horse Newcastle, with a hoof in this condition. The animal was very lame and sore, and had pulled up after work, bleeding from the fissure. I advised rest, the use of a bar shoe, and that the posterior portion of the coronet should be slightly blistered from time to time. He, however, continued to work the horse at intervals, with the result of failing to get him sufficiently well to run in any of his engagements.

A mare of mine, named Vesper, after winning a steeplechase at Allahabad, last November, was found to be very lame from a fissure of the hoof at the posterior aspect of the coronet, extending down to the sole of the off fore-foot, between the frog and external heel. There was slight hæmorrhage from the crack. Under the advice of Mr. E. Elphick, V.S., 3rd Madras Light Cavalry, I poulticed the foot for a couple of days, and then freely opened out the fissure with a searcher, lowered the heels, applied a heart-shaped bar shoe (of a pattern I have long used), and blistered the coronet above the wound, with the happy result of being able to put the mare into work again after an interval of three weeks' rest. Since then she has won two other chases and has continued quite sound. I would lay stress on the necessity of opening out the crack somewhat freely, so as to protect the sensitive parts from being bruised by the divided surfaces coming into apposition when the animal places his foot on the

ground. I also took care to keep the hoof dry, so that its fibres might not be rendered weak and spongy by the absorption of moisture.

This accident is not very uncommon in India.

No. 3.—*On "Bar Shoes."*

In the foregoing note I have alluded to a bar shoe of a heart-shaped form, to be applied as depicted in the accompanying figure.*

Some years ago I had a horse in training whose feet were very weak, and prone to throw out sand-cracks. As I had to keep him in work for his engagements, the idea of thus modifying the ordinary bar shoe occurred to me, as his feet were too unsound to bear the concussion of galloping in ordinary shoes. I do not know whether this plan has ever been recommended before, but it is so useful that I take this opportunity of most strongly advocating its employment with horses that require a bar shoe, and have, if possible, to be worked at a fast pace.

Its most patent advantage is that it is entirely free from the great objection to the ordinary bar shoe—liability to be wrenched off by the shoe of the corresponding hind foot catching on it. I have run horses in at least a dozen races on the flat and across country with this shoe, not counting the work done in training, and have never known of a case of its being interfered with by the hind shoe, by stones, heavy ground, or by any other displacing agency. Its less obvious advantage is that it throws weight on that portion of the frog which is best suited to bear pressure.

No. 4.—*On "Osteo-porosis."*

More than a year ago, when stationed in Cachar (Eastern Bengal), I was shown a six-year old Munipuri pony mare which made a tremendous noise when galloped, or even cantered. On examining the animal, I found the nasal bones abnormally large, the

* The figure shows a bar-shoe, with the bar carried forward to the body of the frog, instead of passing directly across and resting on its branches. —Ed. *V. J.*

nasal cavities considerably contorted, and the external aspect of the nose unnaturally broad and flat, so that the face had a strange square appearance. The pony was in capital health and condition. From the history of the case I learned that about two years previously she became ill and out of sorts, but on being well fed and looked after she recovered, but was found to have acquired the habit of "making a noise." Never having seen a similar case, I was quite unable to explain the nature of the present one, except that the roaring was obviously caused by the contorted condition of the nasal cavities. Shortly afterwards another pony mare was brought to me suffering from Osteo-porosis. Being ignorant of the symptoms of this disease I trephined the nasal sinuses, and was at once struck by the abnormal thickness of the bone, and its extremely spongy character and great vascularity. On referring to Professor Williams' "Veterinary Surgery," I recognised the malady. The last mentioned animal died from general paralysis after a short time. About the same time I met with another case of Osteo-porosis in a pony mare, which presented the diagnostic symptoms of enlarged nasal bones and general paralysis. I learn from reliable sources that the disease in question is not at all uncommon in Eastern Bengal. I now submit that the first-mentioned pony (1) roared from a cause not hitherto described, and (2) that she furnished a case of Osteo-porosis having been cured by good food, and by the *vis medicatrix naturæ*.

The climate of Eastern Bengal is extremely damp and hot; hence the grass of the country, from its rank luxuriance, is for a considerable part of the year most unfitted to supply bone-forming material for young horses that have to depend on it for food.

No. 5.—*On "Cracked Heels."*

In India, race-horses are often troubled with a form of chronic cracked heels, which readily yield to rest, antiphlogistic treatment, and any of the ordinary applications, such as oxide of zinc ointment, but break out again the moment the animal resumes fast work, so that he becomes quite unable to continue it. The

predisposing causes are: The presence of dew on the ground during the early parts of the cold weather mornings, which is the time horses do their gallops; sudden drying up of the dew on the sun rising above the horizon; and rapid alternations of temperature. I have used and recommended, with signal success in such cases, the free application of undiluted carbolic acid, in the manner employed when treating "Grapes," although the extent of soreness of the cracked heels in question would apparently warrant nothing beyond the mildest remedies. The carbolic acid acts as a detergent, and by determining an increased supply of blood to the part, removes the condition of malnutrition and want of vitality under which it suffered. In these cases the feet and legs should never be washed; the brush, hoof-pricker, and dry rubber being all that is required to keep them clean.

Editorial.

TO OUR READERS.

With the present issue of the Veterinary Journal, we venture to chronicle two events which are, perhaps, not without significance to our readers, and are certainly of the highest importance, as well as being a source of the deepest gratification and pride, to ourselves. The Journal has completed its fourth year of existence, and we gratefully acknowledge that the measure of its success has far exceeded the limit to which our most sanguine anticipations carried us when we undertook to build, launch, and pilot it in search of public favour and support. With discouraging predictions from those whose nature is the opposite of generous, and whose predictions—fortunately for ourselves, and only too often unfortunately for others and the public—have never yet been realised, and with stimulating words of welcome and encouragement from others—by far the majority, whose ideas of progress and knowledge of the requirements of Veterinary science are in entire harmony with our own, we commenced our self-imposed task four years ago. The cares and responsibilities of editorship were undertaken and have been continued—as the cover of the Journal testifies—single-handed; for we were determined to rely upon the reputation we had already earned in the profession, and upon our own honest and independent efforts, to at least deserve success, if by mischance we did not succeed in obtaining it. For the way in which our resolve has been carried out we leave our large and increasing circle of readers to judge. Suffice it to say, however, that the objects we had in view at the commencement of our

undertaking have never for an instant been lost sight of. We have done our utmost to promote not only the interests of the Veterinary profession in all English-speaking countries, and more especially in these islands, but we have also endeavoured to place our science upon a higher level than it had hitherto occupied, and one more worthy of its merits. Previous to the advent of this Journal, it may truthfully be said that neither the profession, nor yet Veterinary science, had an adequate representative in English medical literature. Though still in its infancy, we dare to assert that the Journal has well and worthily fulfilled its mission, and that it has already done yeoman's service to both. We can look back with a feeling of intense satisfaction upon the progress which has been made since our first number was issued. The evil influence which had for so many years thrown a spell over the profession, and left its destiny in unkind hands, has been dispelled, never again to arise—if the profession is only true to itself; promoters of disunion and hostile charters have been defeated, and for perhaps the first time in its history the profession is a solid and united body, beginning to feel its strength, and to exercise it in the interests of humanity, science, and civilization. In spite of opposition and formidable obstacles, Veterinary education has made a great stride, and the days when illiterateness and rule of thumb knowledge were the characteristics of a "practical man" are no more; the aspirations of those who desired a more fitting testimony to their abilities, and of their anxiety to continue their studies for the benefit of the public, than the diploma of membership of the Royal College affords, can now be realized in the higher degree which is open to them. Within the last four years, also, Comparative Pathology and Veterinary Sanitary Science—almost unknown previously—have received a large amount of attention, and their great value to medicine and the public health and wealth are beginning to be recognized and acknowledged by physicians, legislators, sanitarians, and the public. In all this advancement we can claim a share, and to those steps which we have not inaugurated we have at least given our heartiest support.

Our pages have been open to the exposure of wrongs and the redress of abuses, and for the first time in this country the Veterinary profession could express itself freely and independently.

Such has been the history of the VETERINARY JOURNAL during its four years' existence; and its future will testify that as it gains in age it will lose none of its vigour, or disassociate itself from any of those attributes which have mainly contributed to ensure its success and influence. Need we say how much we owe, or how deeply grateful we are, to our contributors for the support they have given us. Since its commencement the Journal has been favoured with the assistance of the most enlightened and competent members of the Veterinary profession in this country, and never at any period has a greater desire been evinced to record opinions and experience in medicine and surgery than during the interval that has just elapsed. We look upon this eagerness to disseminate knowledge and discuss professional subjects as one of the surest and happiest signs of progress, and we cannot doubt that as education—general and scientific—is developed, so will this

evidence increase in quantity and quality. It will continue to be our study to foster and encourage this development.

The next event we venture to record, though more of a personal character, is nevertheless none the less significant and deserving of notice from us. The manifestation of good will and appreciation which had been made in our favour by members of the profession, and others, in every quarter of the globe is, we believe, without parallel in our annals; and the testimonial of which we have been the recipient is another proof of the advancement that has been made in professional *esprit* within the last few years. It is now nearly a quarter of a century since we began to pursue our labours in Veterinary and medical literature, and to prepare ourselves for the accomplishment of a task which could be nothing else than a labour of love. For in those days, and in fact until quite recently, there was no inducement or encouragement of any kind to work in this direction; indeed, those who should have themselves set an example, or who ought at least to have been the first to stimulate and applaud others, were either jealous, apathetic, or openly condemnatory. Professional literature, it may be said, we had none; and the absence of this, more than anything else, was adduced as evidence of our nescience and incapacity. A taste for literature or study would seem to have been discountenanced or repressed by those who were supposed to be at the head of the profession—possibly because they were afraid of being left behind in the acquirement of knowledge. Consequently, our science was unrepresented in the realm of letters, and our position was not to be envied. With the greatest empire the world has ever seen, and an almost incomprehensible wealth in animals, in the way of science and literature we were far behind the smallest Continental State. To aid in removing this most damaging stigma was surely a laudable object, and to it we set ourselves. Under almost every conceivable disadvantage and discouragement, and submitting to sacrifices which now, looking back, would appear startling, we have toiled unremittingly by day and by night, with no other consolation before us than that of doing our duty to a profession as useful, noble and humane as any in existence. We did not dream that we should live to see the day when our labours would be so handsomely acknowledged; and therefore the acknowledgment comes with all the more welcome and grateful appreciation. We esteem it not only as an inestimable compliment and reward to ourselves, but also as a guarantee of encouragement and appreciation for those who may follow in our steps, and labour as honestly, independently, and earnestly in the cause of Veterinary science as we have done. Hitherto, when a student left college he had no incentive to pursue his studies and to labour for the benefit and the elevation of his profession. Now this is changed, and we earnestly hope that the manifestation which has just been made will have its effect in bringing many workers into the field. We shall neither be afraid nor jealous of them, but welcome, aid and encourage them all we can, so long as their work is sound and good.

As for ourselves, though we have no desire to lag too long upon the stage, we shall still endeavour to carry out our programme to a successful

end, and continue to labour to enlighten and instruct for, we hope, some years yet to come: happy in the anticipation that we may perchance leave a footprint on the sands of time, and that our toil has not been in vain.

MUTARE VEL TIMERE SPERNO.

THE WAR IN ZULULAND.

IT is gratifying to be able to report that the large number of horses (more than 2000) hurriedly sent off from this country, in troop ships as hurriedly fitted up, have reached their destination in South Africa—a distance of some seven thousand miles—in good condition, and with the minimum loss of 2.77 per cent. Taking all things into consideration—and especially the long period on board ship (thirty to forty days), the extreme temperatures to which the horses were subjected during transit, the defective ventilation and accommodation in some ships, and other influences—this result of the voyage reflects the greatest amount of credit on the Veterinary Surgeons entrusted with such a valuable and (at this critical juncture) most important charge. Pneumonia, pleurisy, congestion of lungs, enteritis, apoplexy, and encephalitis appear to have been the chief disorders terminating fatally during the voyage. There was one ruptured stomach and one case of glanders. In the King's Dragoon Guards two horses died of sea sickness. There were no casualties during the disembarkation at Durban, notwithstanding the alarming reports as to the difficulties apprehended in landing horses.

We learn that sore backs are very numerous among the horses of the Native Contingents, but this is fully explained by the bad condition of the saddlery. No cases of Horse Sickness had occurred at Durban this season, though a newspaper reports that three of the Dragoon horses died of it within twenty-four dours. Every precaution was adopted for its prevention, and woollen nose-bags had been made for the horses to wear while the dew was on the grass. The army in the field now musters some 7000 horses, and the casualties are certain to be numerous. It is stated that the oxen are dying literally by hundreds of the disease called "red-water." In one convoy that left Maritzburg for Greytown, forty-three out of 120 oxen died on the way, most of them forty-eight hours after leaving Maritzburg. An animal will be to all appearances perfectly healthy one day, and able to do his full share of work; the same evening he sickens, and the next day he is dead, and this without premonitory symptoms of any kind.

CAN THE MILK OF PHTHISICAL COWS PRODUCE TUBERCULOSIS?

(*Concluded from page* 197.)

After thus alluding to the experiments and opinions favourable to the transmissibility of Tuberculosis by infected milk, we deem it our duty to mention the contradictory and negative experiments.

Harens and Gunther,* professors at the Hanover Veterinary School, in the course of experiments, otherwise positive, on the transmission of Tuberculosis by the stomachal ingestion of tuberculous matter itself, remarked that the young of a large number of rabbits, artificially tuberculized, were free from the

* *Zundel.* Chronique de l'Allemagne. Recueil de Med. Vétérinaire, 1873, p. 472.

malady when born. In addition, these animals, which were fed daily with the milk from their tuberculous parents, did not show any apparent trace of the disease at the end of ten weeks. The experiments were made on a somewhat vast scale on animals of the same species, and in the ordinary conditions of life—so that we cannot refuse them a very serious importance.

Dr. Schreiber,* in an inaugural thesis which we have been unable to procure, also states that he fed a great number of rabbits with the milk of a phthisical cow, and could not find in any of them the lesions of Tuberculosis.

Professor Perroncito, of the Turin Veterinary School, in a memoir full of interest on "Tuberculosis in the Animal Series,"† had occasion to assist, in 1875, in an involuntary experiment having man for its subject.

Perroncito had brought to his notice a cow, about seven years old, somewhat emaciated, but which yielded every day a somewhat plentiful quantity of milk. This cow, which appeared to be healthy, was sent to the slaughterhouse to be killed for food, and in the interval between its admission to the abattoir and being slaughtered, its milk was entirely consumed by the family of the porter of the establishment. This family was composed of the husband, aged 38 years, the wife, 33 years, and two boys of 3 and 10 years. These persons drank the milk every day, either freshly drawn or boiled and mixed with other food. This accidental experiment continued for eight days, at the end of which time the cow was killed.

At the autopsy, tubercules were found beneath the pleuræ, in the lungs, bronchial glands, liver and peritoneum—all in a very advanced stage. The udder of the cow was, however, perfectly healthy. When Perroncito's memoir was published, two months and a half had already elapsed since the abovementioned family had partaken of the milk in question, and yet no member of it had experienced the slightest disturbance in health.

But it must be remarked that this experiment had lasted only a very short time, especially when we compare it with the fifty days during which Gerlach administered to large animals (calves) the milk of phthisical cows. As the evolution of the malady might not have had time to take place in two or three months, we asked for further information from Professor Perroncito after three years had elapsed, and he writes to the effect that the family had remained in good health; so that it is still a negative experiment. But if we believe for an instant in the virulence of the milk, and the transmissibility of Tuberculosis by it, we should have here, at least, as much as in other transmissible diseases, numerous instances of immunity—so that we must not be in too great haste to draw conclusions from particular cases.

In all the works we have passed in review there are to be found a certain number of observations, the conclusions from which must only be of a provisional nature. The experiments show that, notwithstanding numerous unsuccessful instances, the ingestion of milk derived from phthisical animals appears to be capable of transmitting Tuberculosis—or at least a serious malady similar to that which affected the animal yielding the milk.‡ Perhaps other experimenters have been unsuccessful, but did not make their labours known.

* *Schreiber.* Zur Lehre von Artificieller Tuberkulose. Berlin, 1875.

† *G. Perroncito.* La Tuberculosi in rapporte colla Economia Sociale e Rurale. Turin, 1875.

‡ Certain authors, and among them, in France, is M. Trasbot, deny the histological identity of tubercle and this bovine Tuberculosis. But if the latter transmits a grave and mortal disease, it matters little, from our point of view, whether the malady is designated *Tuberculosis* or *Lympho-sarcoma.*

Taking the published documents into account, however, we may assert that the positive results make a good figure in the face of the negative results.

And there can scarcely be a doubt that, lately, tuberculous matter or milk have been only too frequently taken by chance from any kind of animal, while a choice has been made indifferently of any other creature to experiment upon. It seems, on the contrary, that there ought to be rules which should never be departed from, when it is desired to accumulate all the chances of success. In general, tubercle derived from herbivorous animals is with great difficulty transmitted to the carnivora, and reciprocally. The ingestion of tuberculous matter from the cow is usually without result in dogs, cats, &c., but with the herbivora, on the contrary—such as the calf, lamb, goat, &c.—it produces a rapid and serious tuberculization ; it is more uncertain with the rabbit, however.

It is probable that the reciprocity is real, but it must be admitted that there is very little opportunity for making this control experiment. Spontaneous tuberculization is very rare in the dog and cat, for instance, and I have not found any mention made of experiments in which the suspected products, and particularly the milk, obtained from tuberculous or tuberculized dogs and cats were mixed with the food of herbivorous animals. Researches in this direction would not be without interest.

The general rule we have just formulated is not, however, to be considered as absolute, and exceptions to it may be cited. The cats experimented upon by M. Viseur, of Arras, became tuberculous after eating the lungs of phthisical cows killed at the abattoir. One of the most curious facts in Klebs' memoir, is in connection with a dog which by chance, and beyond premeditated experiment, drank the milk of a cow in the last stage of Phthisis ; this dog became tuberculous in its turn, and this case furnishes, perhaps, the only instance observed in the canine species of the transmission of Tuberculosis by the digestive canal. The tuberculous matter derived from man appears to possess a much lower degree of virulence than that from the ox, and not only when it is employed on herbivorous animals, but also on the rabbit. Bollinger was unsuccessful with human tubercle in the pig, even though that creature appears to be very susceptible to artificial transmission ; but, on the contrary, with the same substance he had produced a generalized miliary tuberculization in the dog, which is nearly always refractory to bovine tubercle.

The choice of the species of animal plays a great part in experiments of this kind, and what is true for the caseous matter is doubtless true also for the milk obtained from diseased creatures. This is another reason for observing great circumspection in the conclusions we think we ought to draw from experiments made on animals, and which may certainly not be at all applicable to the human species, either in one sense or another.

The age of the animals experimented upon appears to us also to have a great importance in the result obtained. Klebs* has made the important observation, that tubercle, when transferred to a robust organism, may not develop itself ; or, even after its development, it is limited, disappears by absorption, and recovery is achieved. Analogous facts have been observed, I believe, in Behier's laboratory, by M. Lionville, and others have been more recently noted by M. Metzquer,† and to such an extent that it might justly be asked if something else than tubercle proper had been employed.

* *Klebs.* Ueber die Entstehung der Tuberculose und ihre Verbreitung im Körper. Virchow's Archiv, 1868, p. 242.

† Academie de Medicine, May 8, 1877 ; and Archives Vétérinaire d'Alfort, May 25, 1877, p. 390.

Young animals have only a feeble vital resistance ; their digestive apparatus being so predominant and manifestly active, while milk is their natural aliment. It is, therefore, with very young animals, still at the teat, that experiments as to the transmission of Tuberculosis by means of the milk have most chance of succeeding. Besides, with them we approach nearer the conditions which are of most interest in human hygiene—the action of this milk on young infants. And in order to obviate the influence simply imputable to the inferior quality of the milk and to its deficiency in nutritive matters, it would be necessary to feed one group of animals of the same species, and even of the same litter, with a moiety of well-boiled tuberculous milk, and the second group with the other portion of the milk, but uncooked, and preserving all its virulence—if such virulence really exists.

In all the animals rendered tuberculous by the milk of phthisical cows, there has been noted a very marked predominance of tubercles in the abdomen. When the animal is killed at a period but little advanced, the lungs are almost healthy, and only a small number of grey nodules are found in the parenchyma, or beneath the pleuræ ; the bronchial glands have alone commenced to offer caseous deposits ; and if the microscopical examination did not extend beyond the thorax, we might in some cases be inclined to believe that the animal was not infected.

But it is in the abdomen that we find the Tuberculosis transmitted by ingestion most concentrated. In the digestive canal the morbid manifestations appear to be first produced : stomachal and intestinal catarrh, diarrhœa, tumefaction of some of Peyer's patches, yellow granulations studding the inner surface of the intestine, caseous transformation of the mesenteric glands, and tubercular deposits in the liver, spleen, and kidneys.

It is impossible to refrain from comparing these artificially developed lesions with those observed in badly-nourished, puny infants, and especially in those which have been submitted to artificial nursing (*allaitement artificiel*), and who so frequently succumb to atrophy, scrofula, and abdominal tuberculization. In infants the respiratory organs are often free from tubercles, and they constitute a classical exception to Louis' law ; Phthisis in them is almost exclusively intestinal and mesenteric.

Without desiring to prejudge in any way the question as to the transmissibility of Tuberculosis by milk, it is certain that the disorders just mentioned are met with, not only in the infants of phthisical mothers who suckle them,* but also in those of healthy parents, and who have been prematurely weaned, and only too often fed on milk obtained from town dairies.

But in these dairies the prolonged confinement, want of space, insufficient ventilation, and exaggeration of the lacteal secretion—perhaps also contagion —engenders and propagates the disease, which really appears to be nothing else than the Pulmonary Phthisis of the bovine species. Gerlach, who was charged with the inspection of the dairies in the suburbs of Hanover, has at times found more than one-half of the milch cows affected with Phthisis ; and Dr. Bell, as we have seen, of eleven cows from the New York dairies, has asserted that ten had their lungs full of softened tubercles.

This frequency of the disease in the cowsheds of towns is unanimously

* We have thought that statistical researches might enlighten us as to the frequency of Tuberculosis in infants suckled by phthisical women, but two difficulties have presented themselves to us : if the child is suckled by its mother, is it from heredity or through the medium of the milk that the disease is transmitted? On the other hand, it is extremely rare that a hired nurse is phthisical—at least to any appreciable extent ; as on the first indication of the malady she is always dismissed. It is very desirable that medical men should favour us with their experience on this point, no matter whether derived from private or hospital practice.

admitted by physicians, veterinary surgeons, and hygienists ; and the principal customers of these establishments are chiefly very young children deprived of the milk of their mother or nurse. The milk is given unboiled, and yet warm from the cow ; its purity is not suspected, as it was drawn in the presence of those who desired it.

It would be, doubtless, the height of temerity to assert that the wasting of infants had its origin in the milk of phthisical cows ; but it is sufficient that this suspicion exists, in order that precautions may be adopted, and that the question may be closely studied. Besides this, it often happens that doctors recommend people threatened, or already affected, with tubercles, to drink the milk of the cow, ass, or goat, and while warm from the teat. Up to the present time, has attention been directed to the health of these animals? When we come to study the experiments of men who hold the first rank in veterinary science in their respective countries—Gerlach, Fleming, Bollinger —it is impossible for scruples not to be entertained ; and while waiting until this scientific question shall be solved, prudence demands that in the large towns at least, *this milk should be submitted to prolonged and complete boiling before using it as food for children.* The precaution is simple and easy, and is almost certainly sufficient to avert all danger ; it has the advantage of not withdrawing from consumption a large quantity of an aliment which, notwithstanding its relative poverty, yet possesses an undoubted nutritive power.

It would be useless at present to insist further on this important consideration, and it will, doubtless, suffice to have called attention to it, and to the fact that too much indifference has been exhibited towards it in France. In doing so I have to reply to the accusation brought against me, as to my raising such fears in the public mind without adducing sure proof of their being well founded.

Now, there are two ways of serving science : making personal researches on a debated subject, or inducing others to make such researches, and exciting discussion on an obscure or little-known point. If I have taken up the latter position, and so inversed the order of things, it is because there is, in my opinion, danger in delay, and also because I have encountered difficulties in experimentation, an enumeration of which may be, perhaps, profitable to those who desire to study this question.

When I commenced this study in October last, I particularly felt that above all things it was necessary to make new experiments, and, in order to do this, I began to look out for a cow in an advanced stage of Phthisis. This appeared to be an easy task, for the majority of authors have stated that nearly all the milch cows of Paris become tuberculous ; yet during four month's search in forty dairies in the most populous and poorest quarters, I did not succeed in finding a very emaciated and coughing cow. I thought at first that the dairy-keepers were deceiving me—but I went into the cow-sheds, designedly entered into long conversations therein, so as to give me more time for observation, yet I never heard a cough. I have asked several veterinary surgeons to examine, with the consent of the owners, cows which looked thin and suspicious ; but not one has been found tuberculous. I then betook myself to one of the abattoirs of Paris, hoping to find some information as to cows which had been refused admission because of disease, and the inspector obligingly gave me the following facts : 25,000 cattle came every year to the abattoir, and of this number only an insignificant proportion were poor or suffering from diseases of which Phthisis should be the chief ; when these animals were killed, their viscera—and especially their lungs—were attentively examined, and only from 20 to 25 showed unmistakable traces of this malady annually. During four months I looked out on every side, and veterinary surgeons who were in a position to aid lent me

their assistance. M. Reynal, the eminent director of the Alfort School, kindly promised me his help, and promised to inform me when he knew of a diseased cow. But notwithstanding all this, I could not succeed in finding in Paris a single animal affected with *advanced and incontestable* Phthisis, so that I could not possibly commence my experiments earlier. At the first glance such a statement appears startling, and yet it may without difficulty be explained by the two following statements :

1. The dairykeepers of Paris have a double interest in not keeping a tuberculous cow in their dairy. When a cow becomes phthisical, the yield of milk generally falls from 20 to 4 or 5 litres a-day—so that the expense of keep much exceeds the amount gained. Finally, when the disease is decidedly present, the animal loses all its value, and the owner can find no one to purchase it at any price. If he sends it to the abattoir for food, it stands every chance of being refused because of its leanness—perhaps it will be seized and destroyed as unfit for food. Therefore it is that, for many years, these dairymen—understanding their own interests—no sooner observe one of their cows commencing to cough and give less milk, than they sell it to a feeder of stock, who fattens it rapidly, and the animal is killed and converted into beef before the pulmonary lesions have made much progress.

When by chance the disease is too advanced, and the cow is very emaciated, the low dealers buy the cows at a low price and kill them beyond Paris; they are then sent there in quarters and hawked about (*vendus à la criée*), after escaping the vigilance of the inspectors.

We see, then, that careful inspection of the abattoirs and butchers' stalls produces and explains the rarity of phthisical cows in the dairies of cities and in the abattoirs, to the great profit of hygiene. And this result is not obtained only in Paris, but also in Bordeaux, Lille, etc. At Augsburg, where the surveillance of abattoirs is rigorous, of 12,205 cattle above a year old sent to them, Adam only found 64 tuberculous in 1871 ; in 1872, of 10,463, he found 133—107 of which were milch cows.* On the contrary, in the neighbourhood of Jena, according to Zurn, the proportion of phthisical cattle is from 16 to 20 per cent., which leads to the suspicion that the abattoirs are not inspected.

2. The second—or at least apparent—cause of infrequency of Phthisis in dairies, is the very great difficulty in diagnosing the malady when it is not in an advanced stage. This difficulty is incontestable, and recognised by all veterinary surgeons ; it is sufficient to remember that Gerlach, the director of the Berlin Veterinary Institute, when he wished to repeat his attempts at the transmission of Tuberculosis by milk, in 1873, completely failed ; and then only he discovered that the reputed phthisical cow was affected with quite another disease. But the mistake is usually made in another way. Fleming, Baillet,† Van Hertsen, and indeed all authorities, recognise that even a very advanced degree of Phthisis is often compatible with a healthy appearance and condition that leave nothing to be desired.

One is sometimes very surprised to find, at an autopsy, very grave alterations in the lungs of cows whose state of health had not been suspected, and which even continued to give a good quantity of milk.

It is therefore probable that this infrequency of Phthisis in the Paris cowsheds is more apparent than real ; and if there is difficulty encountered in finding animals suitable for experiments, it should not therefore be concluded that there is no danger to be apprehended from the milk of phthisical cows, even in case the noxiousness of this milk should be more completely demonstrated.

* *Adam.* Wochenschrift für Thierheilkunde, 1872, No. 9.
† *Baillet.* Traité de l'Inspection des Viandes de Boucherie.

For several weeks, thanks to an obliging friend, I have succeeded in procuring milk from a phthisical cow; experiments have been commenced, and when they are finished I shall deem it my duty to submit the results to the Society, whatever they may be. If they prove that the milk of phthisical animals is dangerous, it will then be time to formulate measures capable of protecting the public health. In the meantime, it appears in every way prudent neither to use, nor recommend to be used, uncooked milk except in cases where there can be no possible doubt that the cows which have furnished it are in good health.

REPORT ON THE EXPERIMENTS AT THE BROWN INSTITUTION ON PLEURO-PNEUMONIA.*

THE inquiries which were undertaken in 1876, relating to the origin and nature of Pleuro-pneumonia, and to the use of inoculation as a means of preventing its spread, having now been brought to a conclusion for the present, in consequence of the legislative difficulties which stand in the way of further experiment, I beg leave to submit to the Council the following statement of the results of our labours:—

The circumstances which led to the inquiry were set forth in a preliminary report which was published in 1876. At that time no experiments had been made, but our first batch of experimental animals had been purchased, viz., two cows, two calves, and four other animals of different ages. They had been kept at Wandsworth Road for three months—a time which we considered sufficient, but not more than sufficient, to afford security against previous infection. I then stated that we should exclude any *living* source of infection from our premises, but would "try, in succession, every channel of mediate contagion known to us, using in our experiments all that deliberation and caution which the consideration of the importance and difficulty of the inquiry enforced upon us."

Before proceeding with the narrative of our experiments it will, I think, be useful to state somewhat more fully than has hitherto been done the nature of the practical questions which we have had in view, some of which have now assumed a greater importance than they had at the outset. Our objects have been (1) to ascertain by experiment by what different ways a healthy animal can be infected; (2) to ascertain whether inoculation is practically useful; and (3) to discover a way of inoculating an animal without risk.

With reference to the first point, the opinion generally entertained is, that a healthy animal may get Pleuro-pneumonia either directly from a diseased animal, or indirectly by being brought into relation with its hide or carcase, or with persons or things that have been in contact with its body. Thus, Mr. Fleming, the author of the well-known "Manual of Veterinary Sanitary Science," expressed his belief very decidedly in 1875, that "infection may occur through the medium of forage, straw, etc., which have been soiled and breathed upon by infected cattle, by the utensils which have been used with them, as well as by the persons who have attended to the sick;" and has since that period expressed the same opinion in still stronger terms. An opposite view had, however, been guardedly promulgated by a very high authority. In the excellent article by Professor Brown on the contagious and infectious diseases of animals, which appeared in the tenth volume of the "Journal," the author said, that "so far as his own observations had enabled

* By Dr. Burdon Sanderson, and extracted from the Journal of the Royal Agricultural Society for 1879.

him to decide, the disease is only communicated by the actual contact of a diseased animal with a healthy one, and that it is at least exceedingly probable that the mode of communication is by the inhalation of the breath of the diseased subject."

With reference to the second question, that of the utility of inoculation, opinions are also, as needs scarcely be said, much divided, although the majority are in its favour. One of the strongest arguments against it is founded on the acknowledged fact, that although inoculation as ordinarily practised produces very severe effects, yet these effects are neither the disease itself nor any modification of it. It has, indeed, been alleged by some authorities that actual lung disease can be generated by the insertion under the skin of bits of diseased lung; but this inference, which if it were well established would be of great importance, can be shown to be mistaken. The observations quoted in support of it are too good to be true. In most instances the time which intervened between the inoculation and the appearance of lung disease was far too short; for we have evidence from the pathological inquiries of Professor Yeo, as well as from other sources, that the development of the disease in the lungs requires a very long time, and usually produces no obvious symptoms at all until it breaks out in the acute form in which it is ordinarily recognised. Consequently, the appearance of symptoms within a week or two after inoculation could not reasonably be referred to the operation as their cause: so that we need not hesitate to conclude that the animals in question had been previously infected by other means.

Another statement that has been made with reference to the mode of action of inoculation is equally unfounded, viz., that although inoculation never produces actual Pleuro-pneumonia, yet that it gives rise, at the place where the morbid material is introduced beneath the skin, to a local disease which is of the same kind as the real disease of the lungs, and that consequently the effect of the inoculation is to produce a sort of Pleuro-pneumonia of the skin! Now it is quite true that there is a great resemblance between them—a likeness sufficiently striking to have impressed some very well-informed persons—but very little stress ought to be placed on it. All inflammatory exudations, whether specific or not, are very like each other as regards their chemical and anatomical characteristics; so much so that it is not possible to distinguish them from each other, excepting by their disease-producing properties. In other words, the only way in which it would be possible to prove that any diseased material derived from the skin of the inoculated animal was pleuro-pneumonic, would be by showing experimentally that when introduced into another animal it produced Pleuro-pneumonia. If this proof were given we should have a right to conclude from analogy with similar cases, that in all probability immunity would be conferred on the infected animal; but in the absence of such proof, the only way in which the protective power of inoculation can be settled for practical purposes, is by observing whether inoculated animals can get Pleuro-pneumonia by exposure.

The experiments which had previously been made for this purpose were unquestionably in favour of the protective power of inoculation. The inquiries of the French Commission, carried out in 1851, in which fifty-four animals were experimented upon at an expense of £2,400, led to the conclusion that "inoculation possesses a preservative power conferring on the inoculated animal an immunity which protects it from the contagion of the disease for a time which remained undetermined," inasmuch as the experiments could not be continued for more than six months. This conclusion, founded on experiments which were evidently conducted with the utmost care and impartiality, has been largely confirmed by the trials which have been made of the practice by owners of stock in this and other countries, and particularly

in our Australian colonies. It appears from a recent Government Report, that in the colony of New South Wales the practice of inoculation has been so successful as a preventive that it has become general; so much so, that the chief inspector of the colony was prepared, in 1876, to recommend to the colonial government that it should be made compulsory.

But the proof of the protective power of inoculation, even if it were much stronger than it is, would afford an insufficient reason for recommending it as a practice, unless it can be shown that the third question—that which relates to the risk of the operation itself—admits of a satisfactory answer. On the ground of its danger the French Commission, notwithstanding their opinion as to its protective power, declined to recommend it as an economically advantageous practice: for they considered that their own experiments showed "that inoculation causes a larger mortality than the disease which it is intended to prevent." No less than 11 per cent. of their animals had died, whereas it was extremely improbable that so large a number would have been sacrificed had they been subjected without inoculation to the ordinary risks of infection. Notwithstanding these facts, the Commission, of which M. Bouley was the Secretary, recommended that it ought to be encouraged, on the ground that, its protective power having been demonstrated, the dangers above referred to would be diminished by improved methods.

Inoculation is usually performed by inserting the liquid which drains from diseased lungs into the cellular tissue. The situation chosen for the purpose is the end of the tail. The reason why this part is selected is, that if, as often happens, the local inflammation becomes excessive, it may be limited by amputation. But notwithstanding this safeguard, the diseased action is apt to spread to the neighbouring parts, in which case it occasions serious illness and often death.

The position of the question was therefore clear. The protective power of inoculation, though by no means definitely settled, had been rendered sufficiently probable to justify a more extended trial than it had as yet received. But the effects of the operation as hitherto practised were sometimes so severe that it appeared probable that the risk would more than cover the advantage.

One of the first objects which we had in view in our experiments was to test the possibility of communicating Pleuro-pneumonia by mediate contagion. The lungs of animals which had been slaughtered in an advanced state of the disease (see Appendix I.) were placed, in the fresh state, under the noses of ten healthy animals of all ages. As none were infected, it did not seem necessary to repeat the trials in a systematic manner, the more so as the persons who attended on the animals were in the habit of handling the diseased organs, which were at that time frequently brought to the Institution for pathological examination.

The experiments on inoculation were commenced in September in 1876. The first practical question which required an answer was whether it was possible by taking extra precautions in the collection of liquid, and particularly by using it only in an absolutely fresh state, to avoid the inflammatory results which have been above described. Five animals were inoculated with perfectly fresh material from a cow killed the same morning (see Appendix II.). A few drops of the clear exudation liquid from the lungs were injected under the skin either of the shoulder or of the side of the neck. For five days the animals remained well; on the sixth day a swelling appeared at the puncture, which gradually increased. In three of the cases it began to subside a week after it had commenced, and eventually disappeared; but in the other two it went on increasing until it had involved the integument of the neck, chest, and belly, at length causing death by general infection, in the one case on the twelfth, in the other on the fifteenth day of the illness.

It is to be noticed that the animals exhibited no loss of appetite, nor any other sign of general disturbance, until the third or fourth day after the swelling appeared, nor did the temperature begin to rise in any instance until that time (see Appendix II.). In the two fatal cases the highest temperature, four and a half degrees above the natural standard (106·4° Fahr.), was reached three days before death.

The mode of progress of the illness indicated very distinctly that, although we had not communicated Pleuro-pneumonia by our inoculations, we had introduced an infection of another kind. If the liquid injected had been a mere irritant it would, if its action had been intense enough, have produced a limited abscess, not a rapidly-spreading and diffuse infiltration. That this was so was confirmed by the appearances observed after death. The internal organs, and in particular the lungs, were found to be perfectly healthy; but the serous membranes exhibited the appearances ordinarily observed in animals that have died of acute general infection—that is, from what is popularly called blood-poisoning.

In the cases I have related, the effects of inoculation were, as has been seen, severe in every instance; for even in the three animals that recovered, the disturbance of health, as indicated by the high temperature and general state of the animal, was considerable. When the tail is selected as the seat of inoculation the case is much more manageable. Here, as before, it is not until the fourth or fifth day that the seat of puncture becomes painful and swollen. The swelling continues for about a week, by which time a slough of dead tissue has usually formed, which eventually separates. About the time that the slough comes away secondary swelling usually begins, and gradually extends to a greater or less distance towards the root of the tail, until, in unfavourable cases, the neighbouring integument is involved, becoming the seat of diffuse cellular infiltration of the same kind as that which has already been described. In the ordinary case, a common result of tail inoculation is that part of the organ separates by necrosis, an event which is often not attended with any serious disturbance of the animal's health (see Appendix III.).

There are two reasons why inoculation, as practised in the above instances, is necessarily attended with danger. One of these is, that the liquid used, however carefully it is collected, not only contains the virus of Pleuro-pneumonia, but possesses morbific properties of another kind, which are due to its being the product of an unhealthy, or, as it is often called, an infective inflammation—properties which would have manifested themselves if, instead of the juice of a Pleuro-pneumonia lung, we had used any other exudation-liquid of a similarly infective character. A second source of danger is, that the living tissue which serves as the channel of introduction is one which we know to be particularly susceptible to infective influences of this kind. By previous experiments, relating to another inquiry, we had found that this second danger could be avoided by infusing the morbific liquid directly into the circulation. We therefore resolved to adopt this plan, feeling sure that, if the Pleuro-pneumonic virus possessed any protective power at all, that power would be exercised to the greatest advantage if the liquid were mixed with the circulating blood; for in this way it would necessarily come into contact, not merely with any particular part, but with every organ in the body. Another advantage which the method of infusion into the blood-stream offered was, that from fifty to a hundred times the quantity of liquid could be introduced at once, and thus the chances of infection be vastly increased.

Fourteen animals were thus inoculated (see Appendix IV.). The instrument employed was a syringe, capable of containing two drachms of virus, and furnished with a slender, sharp-pointed steel tube. The point was made to enter the principal vein by which blood returns from the back of the ear,

and was usually secured by a ligature. The syringe was then slowly discharged, the greatest care being taken to avoid contact with the cellular tissue. It was often unnecessary to divide the skin. The whole operation was conducted without any appreciable suffering to the animal.

In the first batch of eight animals the operation was, in all but one, performed twice in each case, at an interval of several weeks, with a view to greater certainty of result. With the exception of a small prominence which marked the seat of the inoculation, and subsided in a few days, it was in general followed by no morbid effects, either local or constitutional. In one instance, however, that of an old cow, unfavourable symptoms presented themselves on the sixteenth day after the infusion. On that day the bodily temperature, which at the time had been natural and had until then continued so, rose to 103·2° Fahr., and on the day following to 105·6°. At this point it remained until the twenty-second day, after which it declined till death, which occurred two days later. The rise of temperature was attended with other signs of fever, and with difficult breathing, which continued to the last. The post-mortem examination revealed that the cause of death was an acute double pleurisy; but in addition to this there were appearances which showed that the animal, which was thirteen years old, had suffered from chronic lung disease of very old standing. This, although not the immediate, was the predisposing cause of death. The immediate cause was, I have no doubt, the infusion, which, acting on the pre-existing disease, occasioned consequences to which a healthy animal would not have been exposed. It is perhaps desirable to add, that the affection of the pleura from which this animal suffered, although properly called a pleurisy, was of an entirely different kind from the pleurisy which forms part of Pleuro-pneumonia. The sub-pleural tissue, which in the contagious disease is the principal seat of alteration, was in this animal entirely unaffected; nor were any of those characteristic changes in the lung tissue observed which have been so well described by Mr. Yeo in this "Journal." We are therefore justified in concluding that, whatever may have been its antecedents, it was free from Pleuro-pneumonia during the time that it was under observation.

The remaining seven animals were, as has been already reported to the Society, exposed to the infection of Pleuro-pneumonia in the most effectual manner that could be devised. They were removed from the Brown Institution, and placed in sheds which were at the time occupied by diseased animals, and in stalls in which such animals had stood. They remained under these conditions for three months, and in some instances for four, after which they were kept under observation for periods which in the majority of the cases extended to six months. None of them showed any signs of infection. In those that were slaughtered (see Appendix V.) the lungs and other internal organs were found to be perfectly healthy.

(To be continued.)

Proceedings of Veterinary Medical Societies, etc.

ROYAL COLLEGE OF VETERINARY SURGEONS.

ANNUAL GENERAL MEETING, HELD MAY 5TH, 1879.

THE thirty-sixth annual meeting of the Members Politic and Corporate of the Royal College of Veterinary Surgeons was held by advertisement, and in accordance with the provisions of the Charter, on the first Monday in the month of May, being the fifth day thereof, 1879, at the College, 10, Red Lion Square, Holborn, London.

GENL. SIR FREDERICK FITZWYGRAM, Bart., President, in the chair.

Present:—Professors Pritchard, Williams, and Axe; Jn. Atkinson, James Collins, Esq., Principal Veterinary Surgeon to the Army; Messrs. T. Avis, G. Balls, jun., G. A. Banham, T. D. Barford, H. T. Batt, T. G. Batt, R. B. Beman, W. G. Boswell, T. Briggs, Jas. C. Broad, Alfred Broad, Jas. Broad, jun., Jas. Hall Brown, J. S. Brunskill, J. R. Carless, Jn. G. Cattrall, Alb. R. Charles, T. G. Chesterman, Wm. Clark, M. Clark, F. J. Covington, P. S. Cowan, Jas. Cowie, Josh. Davies, E. M. Davy, E. L. Dixon, E. C. Dray, E. A. Drewe, Hy. Dyer, J. W. Evans, Edw. Faulkner, G. Fleming, Jas. Freeman, Jn. Gerrard, H. D. Gibbings, J. M. Gillingham, T. W. Gowing, T. W. Gowing, jun., Thos. Greaves, Jas. Hall, G. A. Hall, H. J. Hancock, M. J. Harpley, W. Stanford Harrison, F. T. Hart, W. Helmore, J. Woodroffe Hill, T. Hopkin, Jn. Howard, D. Hutcheon, Osborn Hills, Wm. Hunting, J. T. King, Alex. Lawson, Josh. Leather, P. Martial, M. Mence, Jas. Moon, Jas. Moore, Thos. Moore, M. E. Naylor, J. F. Oliver, Alf J. Owles, W. F. Peacock, Hy. Peele, T. S. Price, A. B. Proctor, Wm. Rogers, Rd. Rowe, Jas. Rowe, Jas. Rowe, jun., F. G. Samson, C. C. Sanderson, W. D. Sartin, H. K. Shaw, C. Sheather, H. J. Simpson, F. Smith, W. South, D. R. Sowerby, Percy B. Spooner, F. J. Stanley, Jn. H. Steele, T. W. Talbott, P. Taylor, T. Taylor, W. A. Taylor, T. Thursfield, W. S. Wallis, Robt. Ward, Jn. Ward, C. J. Whitworth, G. Williams, E. Woodger, F. W. Wragg, and the Secretary.

The SECRETARY read the notice convening the meeting; also the minutes of the previous meeting, which were confirmed.

The SECRETARY read the notice in the *London Gazette* convening the meeting.

The minutes of the previous meeting were read and confirmed.

The SECRETARY read the Annual Report, which contained a summary of the labours of the Council during the year. As these labours have been already reported in detail in the "Proceedings of the Royal College," published in the VETERINARY JOURNAL, to save valuable space we omit their republication.

The following is a statement of the attendance of Members at the Council meetings held during the year 1878-9:—

Vice-Presidents.

Thos. Wm. Gowing	2	Robert Lewis Hunt ...	0
Henry Joseph Cartwright ...	4	James McCall	1
Samuel Hicks Withers ...	4	George Williams	4

Council.

Gen. Sir F. Fitzwygram ...	7	George Fleming	4
James Collins	8	William Pritchard	3
William H. Coates	8	William Williams	3
George Morgan	4	Hartley Thos. Batt	7
James Freeman	4	Thos. Greaves	5
Alfred Brooke Proctor ...	2	Geo. T. Brown	3
Peter Taylor	6	E. Coleman Dray	8
John Cuthbert	5	Jas. Beart Simonds	2
Richard Samuel Reynolds ...	3	Jas. C. Broad	5
Francis Blakeway	6	James Moon	4
Benjamin Cartledge ...	2	Jn. Roalfe Cox	3
Matthew J. Harpley ...	3	George Balls	5

The Financial Report is annexed. The Balance in hand after defraying the expenses of the year amounts to £330 0s. 5d. In addition, the Council had the satisfaction to announce that the sum of £300 had been invested in 3 per cent. Consols.

Dr.

	£	s.	d.
Balance at Bankers', April, 1878	528	5	11
Examination Fees to March 31st, 1879	1126	13	0
Fellowship do.	63	0	0
Dividends	18	16	6
Legacy from the Estate of the late William Field, Esq., jun.	104	6	8
Copies of Register	11	2	0
Registrar's Fees	0	10	0
Property Tax	2	1	8
Gas consumed by C.V.M. Soc.	1	17	6
	£1856	13	3

Cr.

	£	s.	d.
Examiners' Fees and Expenses	723	0	3
Rent	100	0	0
Rates and Taxes	39	17	0
Salary to Secretary ...	150	0	0
Insurances	1	18	0
Printing and Purchase of Type	63	10	10
Advertisements	11	4	4
Stationery and Postage Stamps	26	16	0
Reporters	11	0	6
Coals, Gas and Wood ...	23	9	6
Specimen Drugs and Preparations in Museum ...	3	9	11
Repairs and Bookbinding	16	8	9
Wages	20	0	0
Petty House Expenses and Messenger	35	11	6
Investment Purchase of Consols	300	0	0
Banker's Charge and Commission	0	5	6
Balance at Banker's ..	330	0	5
	£1856	13	3

Amount of Stock standing in the names of the Trustees, £952 13s. 8d. Three per cent. consols.

On the motion of Mr. DRAY, seconded by Mr. W. S. WALLIS, the report was received.

Mr. DRAY moved, and Mr. GOWING seconded the adoption of the Report.

Mr. HUNTING said there was one paragraph in the Report which, he thought, ought not to be adopted, namely, the paragraph in the proposed new Charter, which provided that all votes of members of the College should be given by voting papers. By this arrangement all the old methods of voting would be, he thought, entirely upset, and there would be no voting at the annual meeting. There were many reasons why the members should not be elected until the Annual General Meeting. The members would then see who had most often attended the Council meeting, and who were therefore most worthy to be their representatives on the Council, and could at the last moment vote for whom they chose, on his merits.

The PRESIDENT explained that the clause was inserted on behalf of the interests of the London members, who, through not being able to vote by papers, were placed at a disadvantage as compared with country members who had that advantage.

Mr. HUNTING said his suggestion was, that the country members should vote in the room.

The PRESIDENT said that already the system of voting consumed a great deal of time, and he thought that Mr. Hunting's suggestion would not be found practicable.

Captain B. H. RUSSELL (of Grantham) thought Mr. Hunting's objection might be met by sending a statement to the country members, showing the number of times the various members of the Council had attended the meetings.

The PRESIDENT said it was quite competent for Captain Russell to make

a motion to that effect ; but it must be remembered that the statement would apply to the old members and not to the new candidates.

Captain RUSSELL then proposed "That a statement be affixed to the voting paper sent round to the country members showing the number of times each member of the Council attended the meetings."

Mr. ROWE seconded the motion.

Mr. FLEMING pointed out that the statement of attendance was not always to be relied upon, because the absence of some of the members was to be accounted for by the fact that they were doing the business of the College elsewhere. He thought if such papers were sent down to the country, as proposed by Captain Russell, a statement should be appended, when necessary, to the effect that the members were absent on College duties.

Mr. P. TAYLOR supported the clause as it stood, contending that it would give every member of the College a just and equal right of voting.

Mr. HUNTING moved that an alteration be made in Clause 3 in the Supplemental Charter, to the effect that "such voting papers be transmitted under cover to the Secretary of the College not less than one week after the annual general meeting has taken place."

The PRESIDENT said the motion could not be entertained, because the Charter expressly provided that the Council should be elected at the annual meeting.

Mr. HUNTING said he would alter it to "on or before the day of the annual meeting," and the votes could be scrutinised on the following day. All other minor matters, such as the insertion of the number of attendances, could be regulated by the bye-laws.

Mr. CHARLES seconded Mr. Hunting's motion as amended.

Mr. FLEMING said it had hitherto been the rule of the College at the annual meeting to name the members of the Council who were elected. If the voting papers were received on the day of the annual meeting, it would be impossible for the Secretary to have them arranged in time for the scrutineers. If members were anxious to vote he did not see why they should not send in their votes at the proper time. The Charter specified that the members of the Council were to be elected at the annual meeting, and if they were not so elected they would not be elected for the next year. He protested against the proposed alteration in the conducting of the business, because it would throw the whole of their working out of gear ; therefore, he begged to move as an amendment, "That the voting papers be not received later than a day before the annual meeting."

Mr. TAYLOR seconded the amendment.

The PRESIDENT said the Secretary had informed him that it required three days to arrange the voting papers. It was a great convenience to the members to get the election finished at the annual meeting, and there would be great practical inconvenience in putting it off for some days.

Mr. HUNTING's motion was then put and lost.

Mr. MOORE proposed that the report should be sent to the members some days or a week previous to the holding of the annual meeting ; it would then contain the number of attendances and the reasons for non-attendance.

Mr. HELMORE seconded the proposition.

Mr. FLEMING pointed out that after the report was sent out there might be some meetings held on urgent business, the report of which could not be included.

Mr. HUNTING supported Mr. Moore's motion.

The PRESIDENT saw no objection to Mr. Moore's proposal, and said that if any meeting should take place after the report was issued a supplement might be made to the report and presented to the meeting. As regarded the number of times the members had attended the meetings there was a great

deal of fallacy, because a great amount of the work of the Council was done at the Committee meetings and Sub-Committee meetings which were not registered at all. He should be happy to support Mr. Moore's motion, but he did not think that Mr. Fleming's idea of inserting the reason why members were absent could be carried practically into effect.

Capt. RUSSELL said that if Mr. Moore agreed to the insertion in the annual report of the number of attendances of members of the Committees, he would withdraw his motion.

This being agreed to,

The PRESIDENT then put Mr. Moore's motion amended as follows:—"That the annual report be circulated to the members of the profession twelve days previous to the annual meeting along with the voting papers, and that the number of attendances of the members of Council on Committees be inserted in the report."

The motion was put and carried, as was also the motion for the adoption of the annual report.

The PRESIDENT then submitted a motion, the effect of which was to entrust to the Council the election of scrutineers at their meeting previous to the annual meeting, thereby facilitating the despatch of business.

Mr. HELMORE seconded the motion, which was carried.

Mr. WALLIS, of Halstead, called the attention of the meeting to the following case. He said he had educated his youngest son, who was now twenty-one years of age, with a view to his succeeding him in his business. He had been with him in practice three years previous to his matriculation, and he entered the Royal Veterinary College in October, 1877. He had been told that his son had creditably passed all his preliminaries, and both the principal and professor had expressed to him their surprise and disappointment at his rejection by the Board, and said they could only account for his failure on three occasions by his extremely nervous temperament, and his getting confused and muddled in the presence of strangers. He (Mr. Wallis) could not tell how burdened he was with sorrow at the result. He had worked hard and successfully for more than forty years, and began to feel that he wanted his son to assist him in advancing age. His plans and hopes, however, as well as those of his son, were entirely frustrated by the 37th bye-law, and his son, whose character and conduct at the College had been irreproachable, was shut out from the profession and doomed to suffer life-long disgrace, and would have to seek other employment in order to maintain himself. He (Mr. Wallis) was unwilling to think that there was a single gentleman in the room who, by supporting the rule, would drive him to adopt so sad an alternative, and he earnestly hoped to have the sympathy and help of the meeting in his trying position. In February last, Mr. Taylor, at a Council meeting, had characterised the restriction as cruel, oppressive, and unjust both to the student and his parents. Their esteemed President took a different view, and regarded the rule as useful and beneficial, and as being advantageous to the student in checking his idleness, and to the father in preventing his son wasting his time at college. He had no doubt that both gentlemen were honest and sincere in their respective views, although he could not think the terrible power and far-reaching disastrous and irreparable consequences of the ruin could have been perceived by the valued and honoured friend who supported it. He was quite sure that the President would not intentionally say or do anything to damage or hinder the profession at large or one of its members; and seeing the ruin the retention of this rule would bring upon him and his son, he trusted the President might be inclined to vote for its abandonment; he would therefore more, "That the Council be requested to take Rule 37 into consideration with a view to its repeal."

Mr. PETER TAYLOR said he had great pleasure in seconding the motion.

He had already given notice of a motion that the bye-law be expunged. Being the father of a large family he felt most grievously the effect of the rule on children who were nervous, or who had not the facility that experience would give them in answering questions before their examiners. He had previously brought the motion for the rejection of the rule before the College, but their honourable President thought it just and right to bring forward an amendment, and upon that amendment there were equal votes. Still, he hoped to see the day when the rule would be expunged, because he considered it iniquitous and unjust. He thought if a student paid his fees and passed his matriculation and examination he had a perfect right as a gentleman to go within the walls of any college and be educated by the professors until he had the ability to entitle him to his diploma, otherwise, a class of men would be produced who by-and-by would get their living by empiricism. He had stated on the previous occasion that there were three large bodies, the legal, the medical, and the clerical, who had no such bye-law. If some of the students who had been thus rejected had had sufficient time they would probably hereafter be an ornament to the profession and fulfil their position as honest men and as Englishmen.

Mr. HUNTING said he was a free trader in everything, and he did not see why the rules of free trade should not be applied to education as well as to other matters. He thought, after a man had paid his fees at college and studied there, he ought to be allowed to go up as often as he liked. He thought that they had better make twenty mistakes before they did an act of injustice, such as had already been done to the gentleman whose case had been mentioned to the meeting.

Mr. GOWING said he agreed with the remarks made by Mr. Hunting. Many young men, however, had resolved to go up for examination, as they said, until they tired the professors out of it. He was of opinion that the fee should be increased in order to stimulate these young men, but not such as would restrict them from presenting themselves for examination for the diploma.

Professor WILLIAMS said, as one who had objected to Bye-law 37, he was glad to see there was a movement for its repeal. He had objected to the bye-law as being unjust to the student, and as being calculated to press heavily on some deserving individual. He would give the repeal of the bye-law his heartiest support, and he thought, with Mr. Taylor, that it ought not to have been inserted. It was originally framed for the purpose of getting rid of a number of young men who had been at the school for a number of years and had not worked. At that time the students of the schools paid a perpetual fee of 25 guineas, for which they had the privilege of attending at such a school for any number of years; but now the perpetual ticket had been abolished, and it was in the power of every individual school to refuse admittance to those students whom they thought were not doing their duty towards their parents. He thought the new members, whoever they were, would do well to support Mr. Taylor in the abolition of what he would call an unjust bye-law.

Mr. GREAVES said he was the unfortunate seconder on two occasions of the motion for the rejection of the bye-law which had been put to the Council and lost. He also had a strong feeling that it was an injustice to many students. He quite agreed with the Professors from the London Colleges who urged that the motion should be carried on account of some students who were black sheep, and who did more harm than good among other students by leading them astray from their studies. It was, however, within the provisions of every college to act individually and expel such students. Another reason why the bye-law was made was that at one time the Royal College of Veterinary Surgeons had very little funds, and there

had been several occasons when a number of rejected students came up, and the examiners had to be called together at a cost of between £30 or £40, for which they did not get a return of a single penny. This was not the case now, however. He agreed with Professor Williams and Mr. Taylor that the bye-law ought to be abolished, and that a young man should be at liberty to present himself before the examiners as often as was necessary, although he would not let him pass simply because he had the idea of tiring the examiners out. A young man ought never to receive a diploma until he was deserving of it. He thought the bye-law should be rescinded in order to give an opportunity to students to become professional men instead of going into the country and being quacks all the days of their lives.

Mr. COLLINS said he was one of those members of Council who had opposed the motion put by Mr. Taylor, and he did it on the ground that the Governors of the Camden Town School found that thirty or forty students had been rejected as many as five or six times; at all events many of them had been attending College for five or six years. He thought it was very objectionable that this large number of idle students should be able to attend the College so long. They obstructed the study of others, and also brought discredit on the College. Men, like these, as long as they could find their parents and friends willing to furnish them with money, would continue to attend, and were very indifferent as to whether they passed their examinations or not. No doubt, to a certain extent, as Professor Williams had said, the question was one for the schools entirely, but the Council was the guardian of the profession, and regulated the course of study, the examinations, and everything connected with the students; and, therefore, he thought on that one point they were in a better position than the schools to decide as to how often students should be examined. He begged to propose that the bye-law stand as it is.

Mr. SIMPSON seconded the motion. In doing so he said that in all legislation there were individual cases of hardship, but they must legislate for a body, and not for an individual. If the Council had thought it best in their judgment to make such a bye-law, then it ought to be retained. With all due respect to the gentleman whose case was now before the meeting, he thought that such a quality as the want of confidence or extreme nervousness would be a great hindrance to him in his profession.

Mr. MOORE said that it was not always the fault of the pupil who was rejected, but sometimes it was as much the fault of the professors or the examiners; therefore, he thought the rule was a most ridiculous one. He knew students who had been rejected in the Edinburgh School merely because they were a little nervous, or from some stupidity or spite on the part of the examiner. One examiner had got hissed out of the place, and his hat knocked over his eyes because he rejected a pupil.

The PRESIDENT said that if Mr. Moore desired *bona fide* for a Committee to inquire into the conduct of the examiners he would second the motion with pleasure, but he was not prepared to hear such statements made against the conduct or efficiency of the examiners without their being substantiated.

Mr. FLEMING, as one of the first examiners who went from England to Scotland under the new system, said that he had always been treated with courtesy. He was not aware of any such occurrence having taken place as that which Mr. Moore had stated. Students might be a little rough and sometimes rather disposed to be rowdy, but he was not aware of their having resorted to such extremely ungentlemanly and unfair means as Mr. Moore had mentioned. He should like to know the time and place of the occurrence.

Professor WILLIAMS said he could safely say that such a thing had never occurred in Edinburgh.

Mr. COWIE said he had been examiner for twenty-four or twenty-five years, and he could honestly say that a fairer and more honest set of men he never met in his life as his co-examiners. The examiners made every allowance they possibly could for nervousness, and everything, in fact, except inefficiency, and he thought Mr. Moore must have been misinformed as to what he had stated.

Mr. Wallis's motion was then put to the meeting and carried unanimously.

The scrutineers then presented their report, which showed the following names, with the number of votes for each :

Professor Axe	455	Mr. Flanigan	221
Mr. Robertson	444	„ Talbot	213
„ Gowing	417	„ Broad	210
„ Simonds	375	„ Wragg	201
„ Whittle	348	„ Santy	194
„ Anderton	300	„ Cox	192
„ Dray	257	„ Owles	121
„ Balls	248	„ Moon	84
„ Cartwright	245	„ G. Williams... ...	41

The first six were therefore declared duly elected—viz., Professor Axe, Messrs. Robertson, Gowing, Professor Simonds, Messrs. Whittle and Anderton.

Messrs. Spooner, Avis, Broad, junr., Peacock, Dixson, and Sowerby were the scrutineers.

On the motion of Professor WILLIAMS, seconded by Mr. GIBBINGS, a vote of thanks was accorded to the President, and the proceedings terminated.

THE ANNUAL DINNER.

The annual dinner of the Royal College of Veterinary Surgeons took place at the Freemasons' Tavern, on the evening of the annual meeting, and was largely attended by metropolitan and provincial practitioners. Major-General Sir F. Fitzwygram, Bart., presided, and among the guests present were General Shute, M.P. ; Colonel Kingscote, C.B., M.P. ; Colonel Ewart, 2nd Life Guards ; Captain Logan Home, M.P., Royal Horse Guards ; Mr. Newdegate M.P., Professor Lyford, Montreal Veterinary College, Finlay Dun, Dr. Burdon-Sanderson, etc.

ROYAL COLLEGE OF VETERINARY SURGEONS' ELECTIONS.

AT the meeting of Council of the Royal College of Veterinary Surgeons, held on May 27th, Professor Williams, New Edinburgh Veterinary College, was elected President ; and Professors Mc Call and Walley, with Messrs. Cartwright, Williams, Moon and Dray, as Vice-Presidents. Mr. Dray was elected Treasurer, and Mr. Coates Registrar and Secretary.

A cordial vote of thanks was given to Major-General Sir F. Fitzwygram, Bart., the retiring President, for his services during the three years he held office.

CENTRAL VETERINARY MEDICAL SOCIETY.

AN ordinary meeting was held at Red Lion Square on Thursday evening, March 6th, 1879, the President, Professor AXE, in the chair, when the discussion of his paper on "Diphtheria in relation to Garget" was renewed.

Mr. FLEMING, adverting to Mr. Power's report, a copy of which was before him, said the attempt to trace the relationship between the human and the bovine malady was very feeble. He knew that the milk-sellers in Kilburn had been severe losers by that report, and it was not unlikely legal proceed-

ings would be taken against the author, or the Pathological Soc ety. Personally he was astonished that Mr. Power should have tried to establish this relationship. Quite recently, H. Dieckerhoff in Germany, had given an account of an infectious form of Mammitis; and an excellent Veterinary pathologist had published a remarkable account of an outbreak of Diphtheria in calves: how it arose was, however, not stated, but it was considered infectious, an attendant being affected with similar symptoms. He doubted if anything similar to Diphtheria affected the cow's udder. He inquired of Mr. Banham if the Committee of the Pathological Society had made any investigation of Garget—in answer thereto nothing had yet been heard of it.

The PRESIDENT said that as soon as he heard of the report, he put himself in communication with the neighbourhood indicated, visiting not only Muswell Hill Farm, but also the Kilburn places; also witnessed the manner of milking and the disposal of the milk; also saw the Veterinary Surgeon attending there, and was assured there was no Garget or any specific disease prevalent for the first six months, with which Mr. Power's report first dealt. The investigation seemed partial, as a list of customers had been furnished the doctor by the owner of the dairies, and this had been strictly followed up; this had not been extended to other dairies: such a house-to-house inquiry would no doubt swell the number of throat affections, which might not otherwise come under medical observation. It appeared from a monthly report of St. Marylebone, furnished him by Mr. Moore, that Dr. Whitmore gave a tolerably full account of the matter.

Mr. FLEMING said it was the fashion to consider the origin of many disorders to reside in the milk, apparently for want of some better explanation; and Mr. Power finding everything else fail fell back on the milk supposition. Looking at the dimensions of the milk trade and its importance in households, he thought medical men should be very careful in that respect, owing to the alarm occasioned. In Kilburn many now would not use milk, and much injury had been occasioned the dairymen. It appeared to be the opinion of the medical men that the disease was really due to the sewers, which were now being opened out and repaired.

Mr. PRICE exhibited a portion of the liver and lungs of a horse—observing they were from a valuable cart-mare five years old, healthy up to the time of injuring a fetlock with a shoe. It festered, accompanied with a deal of inflammation and sympathetic irritation, finally mortifying: death ensuing in five days, a *post-mortem* examination revealed the state of lungs shown. He queried whether there was any such disease before the accident; there were no lung disease symptoms shown then; the thermometer registered 105 deg., and there was a great swelling of the limb.—The President said the lesions were essentially pyæmic, and there were evidences of thrombic affection, and by the plugging of the vessels he deemed it phlebitis affecting the veins of the injured limb, and leading on to blood infection.—Mr. Fleming said with regard to the skin affection lately under discussion, he might state that some three weeks back he received some scab crusts from a case, and immediately got a four-year old horse, and shaving a portion of skin from the side, blistered the part mildly, and applied the crusts mixed with water after the chief action had passed off. Three days later there was a slight exudation, which soon went off. That morning, passing through the stable, he found an eruption on and around the part; he should watch the animal for a few days.—The President said this was interesting. The Fellows would remember in an inoculated case he had detailed, the affection appeared long after the experiment.

Messrs. John Gerrard, of Romford, and George A. Banham, of the Brown Institution, were ballotted for and duly elected, and the meeting adjourned. Present, twelve Fellows and four visitors.

At another meeting held May 1st, in the absence of the president, Mr. Fleming in the chair, the Secretary related a case of a Blenheim spaniel which, on the Thursday previous, while playing with a ball of thread, swallowed a needle and some eight inches of thread, the housekeeper having accidentally dropped it, and looking for it noticed the end of the thread in the dog's mouth, but he bolted it while catching him; Friday and Saturday he continually vomited, and on Sunday strained violently, howling as if in pain, and was sent to him; he gave an enema, and later on drew the thread and needle exhibited from the anus. How it could travel the whole length of intestine he could not understand, and was unaware of any record of a similar incident. He had several needles in his possession taken from the roof of the mouth and throats of dogs and cats.—Mr. Sheather remembered a case (when a schoolboy) of a boy swallowing a puffing dart (*i.e.*, a long needle with a piece of fluff in the eye) by accidentally taking a deep breath which drew it down into the pharynx and stomach; he was ordered to lie on a sofa and eat dry crusts, which was observed for forty-eight hours, when the needle passed away with the pieces without inconvenience; this needle was some $2\frac{3}{4}$ inches in length; Mr. Rowe's was $1\frac{1}{2}$ inches.—The Chairman thought these cases curious, from the fact that it was common for mad people to swallow pins and needles which rarely passed the rectum. In the case of a little girl he had lately heard of, who was addicted to swallowing needles, they passed out at all parts of her body save the rectum, one being from the sole of the foot; in the above cases he thought they became attached to some hard food which assisted them in their passage. A horse in his regiment was under observation now, being supposed to have swallowed one of the iron logs to which the head-collar chain is attached; this log is round shaped, and of nearly 2lbs. weight. The horse had indicated uneasiness by putting his nose in the chest and throwing it in the air, with convulsions passing along the body; he was then thought to be colicky and treated accordingly; but the log being reported as missing, it was doubtless choking at the time, now two months since. Time would show the truth or fallacy of the theory.—Mr. Hancock then gave in a horse-shoe dug up at Ilford Cemetery, 18 feet deep, which he will send to the museum.

Mr. J. H. Steel then read a very exhaustive paper on Bacteria, in relation to Biology* (sent for publication), which occupied the remainder of the evening, and the consideration of which was adjourned to the next meeting.

Mr. John Atkinson, of London, was proposed as a Fellow, and the meeting adjourned. Present ten Fellows and two visitors.

JAMES ROWE, *Hon. Sec.*

NORTH OF IRELAND VETERINARY MEDICAL SOCIETY.

A MEETING of the veterinary surgeons of Belfast and neighbourhood was held in the Thistle Hotel, Belfast, on September 19th, 1878. The meeting was convened for the purpose of forming and establishing a Veterinary Medical Society for the North of Ireland. Mr. J. B. Dunlop, M.R.C.V.S., having been voted to the chair, Mr. George Kidney briefly stated the origin of the movement, which, he said, was the result of several conversations he had with Mr. Mathews, in which they had mutually regretted the want of such a society, which he believed had not—at least, permanently—existed in Ireland, and to the want of which might probably, in some degree, be attributed both the apparent unimportance of the profession in the public estimation, and also the disunited condition of its members in this country.

* Illustrated with diagrams and microscope slides.

In the hope, therefore, of forming such a society, they had conjointly forwarded circulars on the subject to all members within reasonable distance. Courteous and favourable replies had been received from a large number, and the present preliminary meeting was the result. The office-bearers were then elected as follows :—President, Mr. J. B. Dunlop ; vice-presidents, Messrs. Doris, Cookstown, and Kidney, Belfast ; treasurer, Mr. Kernohan, Ballymena ; secretary, Mr. Matthews, Belfast.

A committee of four was then appointed to draw up a code of rules for the guidance of members and the regulation of the Society's meetings.

Professor WALLEY, Principal, Royal (Dick's) Veterinary College, Edinburgh, who had kindly arranged to attend, then addressed the meeting upon the subject of Veterinary Medical Societies, and the advantages, social, professional, and political, which in many instances had been derived from them.

The Professor then read an interesting paper on the nature and pathology of Contagious Pleuro-pneumonia.

The second meeting of the Society was held on December 19th, 1878, at the Thistle Hotel, Belfast, the following members being present :—The President, Mr. J. B. Dunlop ; Messrs. Doris, Kidney, Kernohan, Bryan, Simcocks, Giffen, and the Secretary. Mr. Cooke, M.R.C.V.S., also attended as a visitor. After the business of the meeting, the President read his inaugural address, in which he ably discussed and advocated the objects of the Society, which he sincerely trusted each member would assist, as far as possible, in realizing. Contagious diseases, in connection with their origin, nature, and various peculiarities, formed the remaining portion of the President's address, which was fully discussed.

On March 27th the third quarterly meeting of the Society was held as usual in the Thistle Hotel, the following members being present :—Mr. J. B. Dunlop, president ; Messrs. Kidney, Kernohan, Bryan, Bradshaw, Giffen, Drummond, and the Secretary. Mr. Cooke, M.R.C.V.S., and Mr. Drummond also attended as visitors. Apologies for non-attendance were received from Messrs. Simcocks, Drogheda, and Doris, Cookstown, and several other members who were unable to be present. After the business of the meeting was concluded, when six new members were enrolled, Mr. Dunlop exhibited a most wonderful and interesting specimen of malformation in a fœtal calf, the whole of the internal organs being formed and developed externally ; in fact, the whole of the calf, with the exception of the head and a portion of the neck being completely turned, as it were, inside out. Of course this strange condition of the fœtus involved the death of the mother. Mr. Kidney afterwards read a very good paper on the subject of "Unsoundness in Horses," which gave rise to a long and very useful discussion. There is every reason to hope and believe that the above Society will be a great success, and of very considerable benefit to the profession in the north and east of Ireland.

ONTARIO VETERINARY COLLEGE.

THE spring examination of this Institution took place on Wednesday and Thursday, April 2nd and 3rd.

The following gentlemen constituted the Board of Examiners :—Mr. Cowan, Galt : Mr. Coleman, Ottawa ; Mr. Cæsar, Port Hope ; Mr. Duncan, Goderich ; Charles McNaught, Seaforth ; Mr. Wilson, London ; and Dr. Thorburn. The Board were assisted by several other gentlemen, graduates of the College, who were present as visitors.

The annual distribution of prizes and diplomas to the successful students at the examinations of the Ontario Veterinary College took place on April 4th. Among those present were his Honour the Lieut.-Governor, Hon.

Mr. Wood, Hon. Mr. Crooks, Hon. Mr. Hardy, Professor Buckland, Dr. Andrew Smith, the Principal, Dr. Thorburn, and Captain Grant, A.D.C.

The visitors having been shown over the college by the Principal, were conducted to the museum, where the students had assembled.

Professor BUCKLAND then addressed the students. He gave a sketch of the history of the College since the first inception of the scheme, which had been suggested by the Veterinary College in Edinburgh. Dr. Smith was in the first instance sent out from Edinburgh, and gave a course of lectures to the students attending the speaker's class in University College. Dr. Smith then purchased the present property in Temperance Street, and eventually erected the convenient building, now the Ontario Veterinary College; the result of the experiment had been highly successful, and the institution was not surpassed by any of its kind on this continent. The speaker then paid a tribute to the ability and trustworthiness of the Principal, and said that as one result of the existence of the College, the veterinary profession was being introduced in every part of Canada. The Board of Agriculture and the Ontario Government had both given pecuniary encouragement to the institution, and by the Government aid the museum and library had been formed, and all that was wanted to complete the success of the College was a little more extraneous aid than it now received. The number of students, which was half a dozen at the outset, had now increased to sixty-six.

The SECRETARY having read the names of those who had gained diplomas, his Honour distributed the prizes.

His Honour then said that it would be useless for him to address them at length on a subject with which he had not an intimate acquaintance. He might say that, so far as his own influence extended, he would support his Cabinet in any reasonable proposal to give assistance to these most useful institutions, which played so important a part in matters connected with the development of our agricultural system. (Applause.)

Hon. Mr. WOOD regretted that an engagement prevented his addressing the students.

Hon. Mr. CROOKS expressed his sense of the admirable condition in which he found the College, and of the importance to the country of the work it was performing. His Honour, he was glad to say, had always taken a deep interest in it, and would, doubtless, continue to do so. On a proper knowledge of agriculture and its kindred subjects depended the prosperity of the country, and it was owing to the persevering labours of such men as their Principal and Professor Buckland that so much of the general advance of this knowledge was due. He believed the true interests of Ontario consisted in the improvement of the stock of the farmers, and therefore the importance of such an institution as theirs, which had to deal with what was of so much value to the farmer, could not be over-estimated. His Honour's promise would have a material signification whenever it became the duty of the Government to consider the claims of the College. (Applause.) Personally, he (Mr. Crooks) would have pleasure in advocating its claims in the Province. He was a friend of the Principal, for whom he had a high respect—both on account of his capabilities and his conscientious discharge of his duties. (Applause.)

Professor SMITH, on behalf of the faculty and students of the College, thanked his Honour and members of the Government for the interest they had evinced in the College by their presence on that occasion.

The proceedings then terminated.

The following is the prize and honour list:—

Graduates—D. W. Ackerill, Belleville, Ont.; J. Armstrong, Bayfield, Ont.; D. Bateman, Port Perry, Ont.; F. W. Bartram, Ovid, Mich., U.S.; E. Blackwell, London, Ont.; H. Butcher, Omagh, Ont.; K. H.

Cleaver, Allentown, Penn., U.S.; G. W. Copis, Madisonburg, Ohio, U.S.; S. J. Foelker, Allentown, Penn., U.S.; T. Fisher, Georgetown, Ont.; O. French, East Bloomfield, N.Y.; J. Frink, St. John's, N.B., T. Foster, Belleville, Ont.; J. E. Gemmel, Toronto, Ont.; N. Grant, Sombra, Ont.; C. Green, Richmond, Ill., U.S.; F. C. Grenside, Guelph, Ont.; J. Hammil, Keenansville, Ont.; J. Heckenberger, Catasaugua, Penn.; J. Massie, Smith's Falls, Ont.; C. Matthews, Brougham, Ont.; F. W. Matthews, Toronto; F. McDonagh, Carlow, Ont.; M. McNally, Houston, Texas, U.S.; J. H. Miller, Wadsworth, Ohio, U.S.; E. C. Oliver, Claude, Ont.; J. H. Milnes, Cedar Rapids, Mich., U.S.; E. Prentice, Chicago, Ill., U.S.; W. Rose, Durham, Ont.; J. G. Rutherford, Edinburgh, Scotland; J. Stephens, Collingwood, Ont.; R. White, Whitby, Ont.

Primary Examination—G. F. Lount, Toronto, Ont.; W. J. McCormack, London, Ont.; W. Powers, Port Hope, Ont.

General Examinations—Gold Medal given by the Ontario Medical Veterinary Association to the student passing the best general examination, J. G. Rutherford. Honours—First Class, E. Prentice, S. Foelker, F. Grenside; Second Class, J. Frink, T. Foster, O. French, M. McNally, E. C. Oliver.

Anatomy—Silver medal, Foelker. Honours—Grenside, Gemmel, Prentice, Rutherford.

Entozoa—Prize, Prentice. Honours—Foelker, Gemmel.

Chemistry—Seniors—First (*aq.*), Gemmel, J. H. Milnes. Honours—Grenside, W. Rose, Prentice.

Horse Pathology—Seniors—Silver medal, Prentice. Honours—Foelker, French, Grenside, Rutherford.

Cattle Pathology—Seniors—Prize, Grenside. Honours—Cleaver, French, Foelker, Gemmel, Prentice, Rutherford.

Materia Medica—Seniors—Prize, Cleaver. Honours—Gemmel, Oliver, Massie.

Breeding and Management of Farm Animals—J. G. Rutherford, $26 in books given by the Commissioner of Agriculture. F. C. Grenside, Second Prize, $15 in books, given by the Agricultural and Arts Association. J. E. Gemmel, Third prize, $10 in books, given by the Association.

Juniors—Anatomy—Silver medal, C. Smith. Prize, U. Springer. Honours—Brerton, Burt, Coulson, Loughman, Whiteside. Chemistry—Honours—Dunphy and Smith (equal), Brenton. Pathology—Honours—Springer and Smith (equal).

The number of students attending during the Session of 1878-79, was seventy-six.

ONTARIO VETERINARY MEDICAL ASSOCIATION.

A SPECIAL meeting of the Ontario Veterinary Medical Association was held in the Veterinary College, Toronto, on April 3rd. The meeting was well attended by members from all parts of the province.

Prof. SMITH, President of the Association, opened the meeting, and read the Act of Incorporation of the Association just passed in the Provincial Legislature, on which an animated discussion ensued. The Act, although not all that was wished, appeared to give pretty general satisfaction. The clause in it requiring all qualified veterinary surgeons to register was especially commended. There is also a clause making it a penal offence for any person to assume the title of veterinary surgeon unless he is a graduate of some recognized Veterinary College, and the recognized colleges both of

Europe and America are specified. The Secretary of the Association, Mr. Sweetapple, V.S., of Brooklyn, was appointed Registrar.

It was also moved by Mr. DUNCAN, seconded by Mr. CÆSAR, and carried, "That the Ontario Veterinary Medical Association, in view of the vast stock interests both of the United States and Canada, and the great danger to those interests in both countries of allowing contagious disease to advance without proper measures being taken to check such disease, urge upon the Governments respectively of the United States and Canada to appoint a joint Veterinary Commission to examine into and report upon the steps necessary to be taken to prevent the spread of contagious diseases."

Mr. Coleman, V.S., of Ottawa, read a very interesting paper on "Diagnosis." He dwelt strongly on the great advantage to the profession at the present day of the improved instruments now in use for the study of diseases. He also spoke very highly of that able work, Da Costa's "Medical Diagnosis," and strongly advised those practitioners who had not seen it to add it to their library, and closed his remarks by quoting the pithy Americanism, "be sure you are right, then go ahead."

After some further routine business the meeting adjourned to the next annual meeting.

COLUMBIA VETERINARY COLLEGE, NEW YORK.

THE first annual commencement of the Veterinary College of the City of New York took place lately in Chickering Hall. There was a large audience, a major portion of whom were ladies, who manifested great interest in the proceedings. The platform was beautifully decorated with floral designs and exotic plants. Prof. E. C. Spitzka, M.D., read the report of the Faculty, mentioning among other things the marked success of the College. It was anticipated that the class of 1879-80 would exceed sixty in number. An address by the Hon. D. D. T. Moore was followed by the presenting of certificates to the following juniors: John A. McLaughlin, New Jersey; John Lindsay, Long Island; John Duane, New York; Alexander McKenzie, Connecticut; Nathaniel Foote Thompson, New York; and Allen B. Marsh, Connecticut.

Owing to the unavoidable absence of Dr. Hadden the documents were presented by the Dean of the Faculty, Prof. Bates, who also conferred the senior degree and diplomas on the following members of the graduating class: James Hamill, New York; Charles A. Myer, New York; George H. Burns, Brooklyn; Frank Walton, New York; Frederick Wilson, Brooklyn; J. Frederick Mustoe, Brooklyn; John Cuff, New York; David W. Cochran, New York; Samuel H. Darling, New York; and H. E. Earl, New York.

The next exercise in order was the award of prizes, which was awaited with undisguised anxiety by the competitors and their friends, as the names of the successful parties were kept a profound secret until they were summoned on to the platform to receive their reward from the hands of Prof. Thomas H. Hawkins, M.D. Charles A. Myer, N.Y., was the winner of the J. A. Going gold medal. The Faculty prize of a silver medal for general proficiency was carried off by N. F. Thompson, N.Y., Junior Class. Charles A. Myer was also the successful competitor for the anatomy prize, presented by Prof. Spitzka, consisting of two vols., "Equine Pathology."

Mr. George H. Burns, Brooklyn, was awarded the fourth and fifth prizes, consisting of a case of surgical instruments, and a set of books—Gross on "Surgery." The valedictory address was delivered by James Hamill, D.V.S. of the graduating class. An address to the graduates, by Hon. Judge John R. Brady, terminated the evening's proceedings.

MEETING OF VETERINARY SURGEONS TO CONSIDER THE QUESTION OF FEES.

A MEETING of veterinary surgeons was held on Tuesday, May 6th, at the Plough Tavern, Museum Street, Oxford Street, W.C., to consider the question of fees pertaining to veterinary practice, especially with regard to the system of competition maintained at the Royal Veterinary College.

Mr. T. Moore having read the notice convening the meeting, E. Coleman, Esq., was called to the chair, and after a short conversation of no particular interest, it was proposed by Mr. J. Rowe, seconded by Mr. A Gaskin, and carried unanimously, that the meeting be adjourned till the evening (9 o'clock) of the 5th June next.

ROYAL AGRICULTURAL SOCIETY.

AT the Council meeting held on May 7th, Colonel KINGSCOTE, C.B., M.P. (chairman), reported the receipt of reports from the Royal Veterinary College on investigations made, and the committee recommended that the members be applied to for the expenses incurred. The committee having received and considered two applications from members of the Society asking for remission of fees for veterinary inspection, were of opinion that the funds of the Society should not be called upon to defray the same.

Colonel KINGSCOTE supplemented this report by stating that at the annual dinner of the Royal College of Veterinary Surgeons on Monday last, great satisfaction was expressed by the head of that College, as well as by the heads of the Royal Veterinary College and the Edinburgh Veterinary College, that the Royal Agricultural Society had resolved to offer prizes to encourage students in the study of cattle pathology. A great wish was expressed by Principal Williams, of the Edinburgh College, that the Society should help the students there ; but as he (Colonel Kingscote) ventured to suggest on that occasion, this would be treading on the toes of the Highland and Agricultural Society. However, as that Society was now altering its arrangements with regard to the Veterinary schools, he begged to move "that it be referred to the Veterinary Committee to consider whether prizes, open to all the Veterinary schools, can be offered in conjunction with the Highland Society."

The Earl of RAVENSWORTH pointed out that if the prize scheme were extended to Edinburgh, it would only be just to extend it to Dublin.

Colonel KINGSCOTE replied that there is no Veterinary College at Dublin.

Mr. DENT pointed out that the Society should enter into communication with the Highland and the Irish Societies, with a view of ascertaining whether the three bodies could combine to give prizes to students of cattle pathology in any portion of the United Kingdom. At the same time he pointed out that the providing of facilities for giving these students a practical knowledge of cattle diseases was a matter of greater importance than the offer of prizes.

Earl SPENCER agreed as to the advisability of extending to Ireland the advantages extended to England and Scotland. It was true that Ireland possessed no Veterinary College, although one was very much needed there, but probably students would present themselves from the Agricultural College at Glasnevin to compete for the prizes in question.

Colonel KINGSCOTE said that the subject to which Mr. Dent had alluded had been, and was still being, very much canvassed both by the Royal College of Veterinary Surgeons and the Royal Veterinary College. It was

Europe and America are specified. The Secretary of the Association, Mr. Sweetapple, V.S., of Brooklyn, was appointed Registrar.

It was also moved by Mr. DUNCAN, seconded by Mr. CÆSAR, and carried, "That the Ontario Veterinary Medical Association, in view of the vast stock interests both of the United States and Canada, and the great danger to those interests in both countries of allowing contagious disease to advance without proper measures being taken to check such disease, urge upon the Governments respectively of the United States and Canada to appoint a joint Veterinary Commission to examine into and report upon the steps necessary to be taken to prevent the spread of contagious diseases."

Mr. Coleman, V.S., of Ottawa, read a very interesting paper on "Diagnosis." He dwelt strongly on the great advantage to the profession at the present day of the improved instruments now in use for the study of diseases. He also spoke very highly of that able work, Da Costa's "Medical Diagnosis," and strongly advised those practitioners who had not seen it to add it to their library, and closed his remarks by quoting the pithy Americanism, "be sure you are right, then go ahead."

After some further routine business the meeting adjourned to the next annual meeting.

COLUMBIA VETERINARY COLLEGE, NEW YORK.

THE first annual commencement of the Veterinary College of the City of New York took place lately in Chickering Hall. There was a large audience, a major portion of whom were ladies, who manifested great interest in the proceedings. The platform was beautifully decorated with floral designs and exotic plants. Prof. E. C. Spitzka, M.D., read the report of the Faculty, mentioning among other things the marked success of the College. It was anticipated that the class of 1879-80 would exceed sixty in number. An address by the Hon. D. D. T. Moore was followed by the presenting of certificates to the following juniors: John A. McLaughlin, New Jersey; John Lindsay, Long Island; John Duane, New York; Alexander McKenzie, Connecticut; Nathaniel Foote Thompson, New York; and Allen B. Marsh, Connecticut.

Owing to the unavoidable absence of Dr. Hadden the documents were presented by the Dean of the Faculty, Prof. Bates, who also conferred the senior degree and diplomas on the following members of the graduating class: James Hamill, New York; Charles A. Myer, New York; George H. Burns, Brooklyn; Frank Walton, New York; Frederick Wilson, Brooklyn; J. Frederick Mustoe, Brooklyn; John Cuff, New York; David W. Cochran, New York; Samuel H. Darling, New York; and H. E. Earl, New York.

The next exercise in order was the award of prizes, which was awaited with undisguised anxiety by the competitors and their friends, as the names of the successful parties were kept a profound secret until they were summoned on to the platform to receive their reward from the hands of Prof. Thomas H. Hawkins, M.D. Charles A. Myer, N.Y., was the winner of the J. A. Going gold medal. The Faculty prize of a silver medal for general proficiency was carried off by N. F. Thompson, N.Y., Junior Class. Charles A. Myer was also the successful competitor for the anatomy prize, presented by Prof. Spitzka, consisting of two vols., "Equine Pathology."

Mr. George H. Burns, Brooklyn, was awarded the fourth and fifth prizes, consisting of a case of surgical instruments, and a set of books—Gross on "Surgery." The valedictory address was delivered by James Hamill, D.V.S. of the graduating class. An address to the graduates, by Hon. Judge John R. Brady, terminated the evening's proceedings.

MEETING OF VETERINARY SURGEONS TO CONSIDER THE QUESTION OF FEES.

A MEETING of veterinary surgeons was held on Tuesday, May 6th, at the Plough Tavern, Museum Street, Oxford Street, W.C., to consider the question of fees pertaining to veterinary practice, especially with regard to the system of competition maintained at the Royal Veterinary College.

Mr. T. Moore having read the notice convening the meeting, E. Coleman, Esq., was called to the chair, and after a short conversation of no particular interest, it was proposed by Mr. J. Rowe, seconded by Mr. A Gaskin, and carried unanimously, that the meeting be adjourned till the evening (9 o'clock) of the 5th June next.

ROYAL AGRICULTURAL SOCIETY.

AT the Council meeting held on May 7th, Colonel KINGSCOTE, C.B., M.P. (chairman), reported the receipt of reports from the Royal Veterinary College on investigations made, and the committee recommended that the members be applied to for the expenses incurred. The committee having received and considered two applications from members of the Society asking for remission of fees for veterinary inspection, were of opinion that the funds of the Society should not be called upon to defray the same.

Colonel KINGSCOTE supplemented this report by stating that at the annual dinner of the Royal College of Veterinary Surgeons on Monday last, great satisfaction was expressed by the head of that College, as well as by the heads of the Royal Veterinary College and the Edinburgh Veterinary College, that the Royal Agricultural Society had resolved to offer prizes to encourage students in the study of cattle pathology. A great wish was expressed by Principal Williams, of the Edinburgh College, that the Society should help the students there ; but as he (Colonel Kingscote) ventured to suggest on that occasion, this would be treading on the toes of the Highland and Agricultural Society. However, as that Society was now altering its arrangements with regard to the Veterinary schools, he begged to move "that it be referred to the Veterinary Committee to consider whether prizes, open to all the Veterinary schools, can be offered in conjunction with the Highland Society."

The Earl of RAVENSWORTH pointed out that if the prize scheme were extended to Edinburgh, it would only be just to extend it to Dublin.

Colonel KINGSCOTE replied that there is no Veterinary College at Dublin.

Mr. DENT pointed out that the Society should enter into communication with the Highland and the Irish Societies, with a view of ascertaining whether the three bodies could combine to give prizes to students of cattle pathology in any portion of the United Kingdom. At the same time he pointed out that the providing of facilities for giving these students a practical knowledge of cattle diseases was a matter of greater importance than the offer of prizes.

Earl SPENCER agreed as to the advisability of extending to Ireland the advantages extended to England and Scotland. It was true that Ireland possessed no Veterinary College, although one was very much needed there, but probably students would present themselves from the Agricultural College at Glasnevin to compete for the prizes in question.

Colonel KINGSCOTE said that the subject to which Mr. Dent had alluded had been, and was still being, very much canvassed both by the Royal College of Veterinary Surgeons and the Royal Veterinary College. It was

a most difficult question, for although the Royal Veterinary College were prepared to take diseased animals free of charge, in practice this offer was not accepted. The matter would not be lost sight of, but there were immense difficulties in the way.

The report of the committee was then adopted.

PRESENTATION OF A TESTIMONIAL TO GEORGE FLEMING, ESQ., F.R.C.V.S., 2ND LIFE GUARDS, AT THE ANNUAL DINNER OF THE PROFESSION, 1879.

THE presentation of the Fleming "Testimonial" took place at the annual dinner of the Royal College of Veterinary Surgeons, and this duty was allotted to Mr. Greaves, than whom—from his knowledge of Mr. Fleming and his labours, as well as his acquaintance with the history of Veterinary medicine in this country for many years—no one could be more competent. In making the presentation, Mr. Greaves said :

Mr. Chairman, Fellows, and Members of my Profession, I rise to perform the very pleasing duty of presenting a testimonial to a worthy and honoured member of our profession. I feel it to be a distinguished honour to be permitted to do this, and to convey with this testimonial the verbal expression of a grateful profession. Being the representative and exponent of the wishes and feelings of my Veterinary brethren, I find some difficulty in expressing in appropriate language their views and sentiments towards the person whom it is their delight to honour. The labours of Mr. George Fleming in the field of Veterinary literature are beyond our praise. Mr. Fleming is a man who has essentially risen from the ranks by his own indomitable industry, provident habits, and ability ; he has raised himself to the rank of one of the first scientific veterinary surgeons of the day. We are all proud of him. He is a star in the profession to which he belongs. You will see this is no flattery when I tell you he has educated himself to speak, write, or read six or seven languages. He is the author of several classical works, which are standard works not only for veterinarians, but also for medical men all over the world. His work on "Obstetrics," on "Veterinary Sanitary Science and Police," on "Rabies and Hydrophobia," on "Horse-shoes and Horse-shoeing," and on "Animal Plagues," these alone necessitated reading and translating in eight or nine languages. There is also his translation from the French of Chauveau's "Comparative Anatomy of the Domesticated Animals"—one of the best and most complete of all the foreign text-books—and various valuable articles too numerous to mention. We feel it is therefore our bounden duty to return him some recognition for services rendered. I feel constrained to admit that, although this testimonial emanates from Great Britain, Australia, Canada, the United States of America, and India, it but feebly expresses the estimation in which he is held by the members of the Royal College of Veterinary Surgeons. We find in him a man who has long laboured assiduously, honestly, and earnestly in our profession ; his mind has risen to a large and just conception of life, and understands in its true sense that life is more than meat. His works will live after him ; he has proved himself a man gifted with talents of no mean order, and these he has exercised for our good in the advancement of our common profession. He seems to have thrown his whole soul and his life into the struggle ; and the poet says—

> "Life is real ! life is earnest !
> And the grave is not its goal ;
> Dust thou art, to dust returnest,
> Was not spoken of the soul."

We are taught that the emancipated soul will rise to a h gher, brighter, and better world, with remembrances of kindness rendered here. To most of us this life is a chequered scene : even the material elements of this testimonial may, nay must perish, but the ethereal elements of the friendship which called it forth are capable of everlasting duration ; and the expressions of kindness with which its presentation is being accompanied will, we hope, afford solace in life's latest hour, and possibly freshen in eternity. Mr. Fleming's active mind and enterprising disposition have rendered him useful in many ways, thus greatly increasing our obligations to him. He possesses every attribute of a humane English gentleman. The strong characteristic of Mr. Fleming's nature seems to be intense earnestness, blended with great gentleness and kindness towards all animal creation. We are told that—

> " The heart is hard in nature, and unfit
> For human fellowship, as being void
> Of sympathy, and therefore dead alike
> To love and friendship both, that is not pleased
> With sight of animals enjoying life,
> Nor feels their happiness augment his own."

His uncompromising antagonism to vivisection and cruelty to animals in every form, proves the noble qualities of his mind, and shows that he

> " Casts round the world an equal eye,
> And feels for all that live."

As an Examiner in our Court of Examiners, Mr. Fleming has earned for himself the high esteem of the Council and the students. As the proprietor and editor of that popular monthly publication, THE VETERINARY JOURNAL, diffusing so much useful and scientific matter—by this and other almost Herculean tasks he has endeared himself to his profession.

In conclusion, I beg to hand you this beautiful timepiece with its inscription, and this purse of gold—a purse containing 300 sovereigns—out of the bounty of 284 members of my profession. We most sincerely wish you many years of health and life to continue your noble labour; and whenever in the ordinary course of nature your useful and valuable career draws to a close—when the silver cord is loosened, when everything lovely that has been near and dear to you in this beautiful world fades from your vision, and the grim messenger approaches his prey—even in that dread hour you will not be forgotten nor forsaken by your Veterinary brethren, for their prayer will then be that your end may be peace.

To this address Mr. Fleming replied in a most feeling and appropriate speech. In the course of his remarks he alluded to the earnest desire which had always animated him for the advancement of Veterinary science in this country, and that he had sought to identifiy himself with every measure calculated to promote its progress. His labours in this direction, which had been unremitting and unwearied for nearly a quarter of a century, were, he assured those present, entirely devoid of selfish aims or intentions ; for the history of the profession in this country had shown that there was nothing to hope for in the way of promotion or preferment by such labours as he had undertaken or such tasks as he had accomplished. He had done his utmost to raise Veterinary medicine to the position it should occupy, and to contribute to the scientific knowledge, as well as the material prosperity, of the members of that profession to which he was so devotedly attached. He had also neglected no opportunity of claiming for Veterinary science that acknowledgment from human medicine, agriculture, sanitary science, humanity, and the public, to which it is so well entitled. Aiding and rejoicing in the success of everything calculated to enhance the value of this science,

the great and unexpected testimonial of the esteem in which his efforts had been held by his brethren, and of which he was the recipient that night, would urge him to continue his efforts with unabated earnestness and zeal; and until the chimes of the beautiful clock with which he was now presented became inaudible to him in the stillness and long, dark night of eternity, he would ever cherish their regard and esteem as the dearest treasures he could possess. None could be more competent judges of the value of his labours, and to win their recognition was surely sufficient to satisfy the highest ambition ever possessed by one of their number. To gain the applause of our fellow-men was a laudable and worthy ambition; and when it was gained by fair, honest, and independent means, without recourse to meretricious or ignoble stratagems, then he felt the applause was deserved, and could be received with fervent gratitude and unalloyed pride. Thanking the members of his profession most earnestly for their expressions of kindness towards himself, and for their gift, and more especially Mr. Greaves for the feeling way in which he had embodied their sentiments, he desired to assure those gentlemen who had particularly exerted themselves in this movement—the secretary, treasurer, and others—of his grateful appreciation of their kindness.

THE "FLEMING" TESTIMONIAL.

IN concluding my trust for the above I beg to submit a full list of subscribers thereto, and of the attendant expenses; and beg that space will be accorded in the VETERINARY JOURNAL for the same.

JAMES ROWE, Jun., *Honorary Secretary.*

Cr.

	£	s.	d.
Printing, postage-stamps, and post-cards	11	7	4
Advertisements	11	4	0
Waiter attendance	1	6	0
Commission on country cheques	0	1	8
Testimonial clock	48	10	0
Testimonial purse	300	0	0
Balance in hand, remitted	0	5	0
	£372	14	0

Audited and found correct by Messrs H. T. and T. G. Batt.
May 10th, 1879.

	£	s.	d.		£	s.	d.		£	s.	d.
Allmann, J. D.	1	1	0	Balls & Son ...	2	2	0	Broad, A. ...	1	1	0
Arnold & Sons	5	5	0	Banham, G. A.	0	10	0	Broad, J. C. ..	1	1	0
Anderton, T. W.	0	10	6	Barber, J. S. ...	1	1	0	Broad, T. D. ...	1	1	0
Atkinson ...	1	1	0	Barford, J. D.	0	10	0	Bromley, W. ..	1	1	0
Aubrey, T. ...	0	10	6	Brown, N. ...	0	10	6	Broughton, W.	0	10	6
Auger, T. E. ...	0	10	6	Batt & Son ...	3	3	0	Brown, Prof. ...	1	1	0
Aulton, A. ...	1	1	0	Beard, H. ...	0	10	6	Boyer	1	1	0
Axe, J. M. ..	1	1	0	Beddard, E. ...	1	1	0	Burrell, jun., ...	1	1	0
Axe, Prof. ...	1	1	0	Bell, J.	1	1	0	Byer...	1	1	0
Baird, A. ...	1	1	0	Bentley, W. ...	1	1	0	Catlow, J. W....	1	1	0
Baird, C. ...	1	1	0	Blakeway, F. ...	1	1	0	Carless & Son...	1	1	0
Ballière, Tindall and Cox ...	2	2	0	Bowles	1	1	0	Carless, G. ...	1	1	0
				Boyd	4	0	0	Catt, A. E. ...	1	1	0
Brown, Miss ...	0	10	0	Bradshaw, H....	0	10	0	Carter, J. ...	0	10	6
Bale, J.	0	10	6	Briggs, F. ...	1	1	0	Cartledge, B. ...	1	1	0

	£	s.	d.
Cartwright&Son	2	2	0
Cartwright,H.J.	1	1	0
Cartwright, R.	1	1	0
Cave, G.	1	1	0
Cave, T.	0	10	6
Challinor, A. ...	1	1	0
Challinor, C. ...	1	1	0
Chesterman, T.	1	1	0
Clark, W. ...	1	1	0
Clarke, J. A. ...	1	1	0
Coates, W. H...	1	1	0
Colam, J., R.S.P.C.A.	1	1	0
Coleman, J. B...	0	10	0
Collins, J. ...	2	2	0
Cooper, S. J. ...	0	10	6
Cowie, J. ...	2	0	0
Cox, Roalfe ...	5	5	0
Cuthbert, J. ...	1	1	0
Dacre, W. ...	1	1	0
Daniell, A. B....	1	1	0
Darwell&Son...	1	1	0
Davy, E. M. ...	1	1	0
Dewar, J. R. ...	1	1	0
Dickie	1	0	0
Dobie, W. ...	1	1	0
Duguid, Prof....	1	1	0
Dunlop, J. B....	1	1	0
Elam, C. W. ...	1	1	0
Evans, G., M.D.	1	1	0
Faulkner, E. ...	3	3	0
Faulkner, J. S.	1	1	0
Fergusson, H.	1	1	0
Ferris	0	10	6
Field, W.... ...	1	1	0
Findlay, J. ...	1	1	0
———	0	11	6
Fitz - Wygram, Sir F.	1	1	0
Forbes, C. (Australia) ...	1	1	0
Fraser, J.... ...	1	0	0
Freeman, Jas....	1	1	0
Freeman, John	0	10	6
Freeman, Joseph	0	10	6
Frost, R. F. ...	2	2	0
Gardiner, B. ...	1	1	0
Gerrard, J. ...	1	1	0
Gibbings, H. D.	0	10	6
Gibbs, J.... ...	0	12	0
Gibton, R. ...	0	10	0
Gloag, J.... ...	1	1	0
Goulé, H. ...	0	10	6
Gowing & Son	2	2	0
Gray, G.	1	1	0
Greaves, T. ...	12	12	0
Gresswell, C. ...		11	0
Groves, C. ...	0	5	0
Gudgin, T. ...	1	1	0
Gunn, A.... ...	1	1	0
Gunn	0	10	6
Hamilton,— M.R.C.S. ...	1	1	0
Hammond ...	0	11	6
Harpley, — ...	1	1	0
Hewlett & Son	2	2	0
Heyes, G. ...	1	1	0
Hill, J. W. ...	5	5	0
Hills, O. J. ...	3	3	0
Hinge, D. ...	1	1	0
Hodgkins, J. ...	2	2	0
Hodgkinson, E.	0	10	6
Hopkin, F. ...	6	6	0
Houston, W. ...	0	10	6
Hubbick, C. ...	1	1	0
Hunting, D. ...	0	10	6
Hunting, W. ...	1	1	0
Hutcheon, D....	1	1	0
Irving, J.... ...	1	1	0
James, I. C. ...	1	0	0
Jarvis, F. ...	2	2	0
Jeeves, T. F. ...	1	1	0
Johnston, W. ...	1	1	0
Jones, A.... ...	1	1	0
Kennedy, W. ...	1	1	0
Kerr, M. ...	1	0	0
Kettle, B. ...	1	0	0
Kidney, G. ...	1	1	0
Kidd, H.... ...	0	10	6
Killick, J. A. ...	2	0	0
King...	1	1	0
Knight, R. ...	1	1	0
Knott, S. ...	1	1	0
Lawson, Mrs. ...	5	5	0
Lawson, A. "In Memoriam."	2	2	0
Lambert, J. D.	3	0	0
Lambert, T. D.	5	0	0
Lawson, A. ...	1	1	0
Lawson, J. ...	1	1	0
Lawson, W. C.	1	1	0
Leather & Sons	3	3	0
Lewis	0	5	0
Lepper, G. A....	1	1	0
Locke, S.... ...	1	1	0
Longhurst ...	1	1	0
Longhurst, S....	1	1	0
Longhurst, W.	0	10	6
Low, F.	1	1	0
Lupton, J. I. ...	2	2	0
MacCallum ...	1	1	0
MacGillivray ...	1	1	0
Mackay, Sellars and Co. ...	3	3	0
Markham, J. ...	1	1	0
Marshall, F. J.	1	1	0
Martin, J. B. ...	2	2	0
Masters, W. ...	1	0	0
Matthews, I. ...	1	1	0
Mayer, Prof. ...	1	1	0
McCall, Prof. ...	5	0	0
McEachran, Prof.	5	0	0
McFadyean, Prof.	1	1	0
McGavin, J. ...	0	10	0
McGill, Prof. ...	1	1	0
Mence, M. ...	1	1	0
Menzies, D. ...	0	10	6
Menzies, J. S....	0	10	6
Merrick, J. ...	1	1	0
Meyrick, J. ...	1	1	0
Mitchell, A. ...	1	1	0
Mitchell, R. ...	0	10	6
Mitchell, G. ...	3	3	0
Mole, W. ...	0	10	6
Moir, C.	1	1	0
Moon, J.	1	1	0
Moore, J. W. T.	1	1	0
Moore, T. ...	1	1	0
Moreton, R. ...	1	0	0
Morgan, G. ...	1	1	0
Mulvey, W. ...	1	1	0
Murphy, M. ...	1	1	0
Naylor, W. E.	1	1	0
Nuttall, E. ...	1	1	0
Olver, H. ...	1	1	0
Olver, jun., T.	1	1	0
Over, A. ...	0	10	0
Overed, J. D....	0	10	0
Owles, A. ...	2	2	0
Page, C. N. ...	1	1	0
Paley, D. ...	2	2	0
Pallin, W. ...	1	1	0
Panton, W. ...	0	10	6
Parker, J. ...	1	1	0
Paton, J. ...	1	1	0
Paterson, R. ...	0	10	0
Peele, H. ...	1	1	0
Peele, J. E. ...	1	1	0
Penhale, W. ...	1	1	0
Penhale, W. ...	0	10	6
Poyser, G. ...	1	1	0
Poyser, R. ...	2	2	0
Pritchard, Prof.	1	1	0
Procter, T. ...	1	1	0
Price, T. S. ...	1	1	0
Pyatt, F. J. ...	0	10	6
Pyatt, G. H. ...	0	10	6
Reynolds, R. ...	1	1	0
Reynolds & Son	1	1	0
Ring, Mrs. ...	2	2	0
Robb, A.... ...	1	1	0
Roberts, M. J.	1	1	0
Roberts, T. ...	0	10	6
Robertson, W.	1	1	0
Robinson ...	1	1	0
Rostron, J. ...	1	0	0
Rothwell, P. ...	0	10	6
Rowe, J., jun....	1	1	0
Rowe, R. ...	0	10	6
Rushall, A. ...	1	1	0

	£	s.	d.
Russell, Capt....	1	1	0
Santy, A. H. ...	1	1	0
Sartin, J. R. ...	1	1	0
Scott	2	2	0
Sewell, H. ...	2	0	0
Sheather, C. ...	1	1	0
Shaw, H. R. ...	0	10	6
Sheffield, S. ...	1	1	0
Shipley, W. ...	1	1	0
Short, G. R. ...	1	1	0
Simcocks & Son	4	4	0
Simonds, Prof.	1	1	0
Simpson, H. ...	1	1	0
Simpson, T. ..	1	1	0
Smith, F.... ...	1	1	0
Smith, Prof. ...	10	0	0
Smith, W. ...	1	0	0
Snowball, G. ...	2	2	0
South, W. ...	1	1	0
Spreull, A. ..	0	10	6
Stainton, A. ...	0	10	6
Stanley, E. ...	5	0	0
Stanley, W. T.	1	1	0
Steel, C.	1	1	0
Steel, J. H. ...	1	1	0
Stevens, F. ...	0	10	6
Stephenson, C.	1	1	0
Storrar & Son...	1	1	0
Symonds, T. ...	1	1	0
Tailby, M. ...	1	1	0
Tait...	0	10	6
Taylor, J. A....	3	3	0
Taylor, T. ...	2	2	0
Taylor & Son ...	10	10	0
Thompson, H.	1	1	0
Thompson, J. R.	1	1	0
Torr, C. H. ...	1	1	0
Trigger, R. C.	1	1	0
Unsworth, J. ...	1	1	0
Vincent, P. ...	0	10	6
Victoria S.P.C.A.	1	1	0
Walker, F. ...	1	0	0
Walley, Prof. ...	1	1	0
Wallis, Page ...	1	1	0
Walters, R. E.	1	1	0
Ward, R. ...	1	1	0
Welsby, J. ...	1	1	0
Whincop, G. ...	0	10	6
Whittle, W. ...	2	2	0
Whitworth, C. J.	1	1	0
Wiggins, J. ...	1	1	0
Williams, Prof.	2	2	0
Withers, H. ...	1	1	0
Withers, S. H.	1	1	0
Woodger, E. ...	1	1	0
Woodger, jun. J.	1	1	0
Woods, W. ...	1	1	0
Wragg, F. W.	1	1	0
	£372	14	0

Jurisprudence.

SUFFOLK ASSIZES.

ALLEGED NEGLIGENCE BY A VETERINARY SURGEON.

THIS suit, Smith *v.* Marking, was tried before Lord Chief Justice Cotton, in February last, Serjeant Ballantine, Q.C., and Mr. C. E. Jones for plaintiff; Mr. Bulwer, Q.C., and Mr. Digby for defendant.

The plaintiff, Mr. Benjamin Smith, resides at Great Tagley Farm, Stambourne, Essex; defendant, Mr. Charles Marking, veterinary surgeon, resides at Toppesfield, in the same country. It was an action to recover the value of a colt, which it was alleged had died through defendant's negligence in performing an operation.

Serjeant Ballantine said the question the Jury would have to determine involved details of a technical and very disagreeable nature. It was necessary to perform a certain operation on horses, but if it was to be performed at all it should be done with mercy and feeling towards the animal, which for the purpose of being made more useful to mankind was subjected to such a fearful and cruel ordeal. The charge against the defendant was that, so far from using consideration for those feelings, and applying the skill that ought to be applied in an operation of that kind, exhibited the grossest want of skill, flagrant negligence, and cruelty, which if he described it to the jury as it was described to him, would make their blood run cold. If the jury were ageeed on the facts, all they would have to consider was the value of the colt, which died through defendant's maltreatment.

The learned counsel agreed as to the value of colt at £45, in the event of a verdict for plaintiff on the question of negligence.

The evidence, briefly, was to the effect that the colt escaped just when everything was ready for the operation, and when it was captured it was in a high state of excitement for the exercise, and in an unfit condition to undergo an operation. This was mentioned to defendant by plaintiff, but defendant said now he had caught it he would cast it, *i.e.*, secure it with a rope used for

that purpose. This he did and proceeded to get his instruments ready. One of the irons not being firmly fixed in the handle he secured it by striking it on the horse's leg, and on being expostulated with by one of the men he secured the second searing iron by striking it against the wall. Plaintiff remarked that defendant was not performing the operation properly. The defendant had to be again sent for, and in the night he performed another operation on the poor colt. Plaintiff treated the colt according to defendant's instructions, but it died after great suffering.

Plaintiff's statement was corroborated by several witnesses.

Thomas James Polton, member of the Royal College of Veterinary Surgeons, residing at Messing, said he had heard the evidence, and was of opinion that the operation had been improperly performed, and gave his reasons. One was the failure to arrest hæmorrhage by cauterising with a hot iron. It would not be safe to perform the operation while the horse was in a heated condition from exercise because of the relaxation of the voluntary and involuntary muscular fibres of the body: and it would tend to produce hæmorrhage. He described the mode of treatment he would have adopted to stop the effusion of blood. The irons used should not be too hot or too cold. If too hot the iron would destroy the contracting tissue which should form the plug to stop the bleeding. To sew up the wound, as was done in this case, would ensure the animal's death, by causing blood poisoning. Had never heard of an animal being afterwards punctured by a needle, or by anything like the instrument produced. Never saw such a thing at College. Puncturing was so highly objectionable that no one out of a lunatic asylum would do it under such circumstances.

By Mr. Bulwer: Did not know anyone in the profession in this locality. Had heard of Mr. Shorten, of Ipswich.

Mr. Bulwer: Supposing he were to differ from you, you would consider him a lunatic?

Witness: I certainly should. (Laughter.) I have never heard of such a thing. (Laughter.)

That is quite enough; I am quite satisfied. In medical literature, in your extensive reading—(a laugh)—have you never met with such a thing?—No answer.

I want to know, because this is a scientific question. Have you heard of Mr. Wallace, of Halstead?—Witness replied that he had, and that he was very highly spoken of.

If he happened to differ from you, following the same course of reasoning, would you think he was a lunatic?—I never heard of such a thing. It's against all scientific reasoning. (Laughter.)

I don't care whether it is against all scientific reasoning or not. (Laughter.) You have said that the man who would say such a thing was a lunatic?—I did.

Mr. Bulwer: Then if Mr. Wallace differs from you, he is a lunatic? (Laughter.) A long pause.—Yes. (Much laughter.)

Mr. Wright, of Ipswich—do you know him?—I have never seen him.

You need not have seen him—have you heard of him?—No.

You have heard of Mr. Avis, the consulting physician of the Royal College of Surgeons?—There are no physicians of that college. (A laugh.)

I will correct my remark and say "consulting surgeon." Do you know him as a consulting surgeon?—I never knew him as a consulting surgeon. I only knew him as a demonstrator.

Well, I will be satisfied with demonstrator. (Laughter.) I suppose that involves great knowledge and high skill?—I dare say it does.

If he should go into that box and differ from you, he also is a lunatic?—Very likely; following the same course of reasoning, yes. (Laughter.)

I have a book here written by William Williams, with a great number of letters after his name, and four lines describing his distinctions. (Laughter.) He has written a book on the "Principles and Practices of Veterinary Surgery." Do you know enough about it to tell me whether it is a book of authority?—I think it is from what I have heard.

Mr. Bulwer read a paragraph bearing upon the subject of the case, including the words, "A few punctures of the lancet would allow the serosity to drain away." Do you agree with that?—Yes, when it extends to the abdomen, but not otherwise.

Will you withdraw the "lunatic"? (Laughter.) Yes, so far as the abdomen is concerned. (Laughter.)

Do you consider the person who punctured that would be a lunatic or otherwise?—No. (Laughter.)

Mr. Peter S. Cowan, member of the Royal College of Veterinary Surgeons, living at Colchester, deposed to the impropriety of operating on a horse, under the conditions described. It was wrong to do it while the horse was in a perspiration from exercise, because the muscular system was in a flaccid condition.

Cross-examined: There is a medicated tow used in my profession as well as the coarse tow, but I know of no conceivable instance in which tow might be used in these cases. It would not be proper.

Mr. Bulwer: Don't you become an advocate. (Laughter.)

Serjeant Ballantine: And you must not become a witness. (Laughter.)

His Lordship requested witness to answer the questions to the best of his knowledge.

Witness promised to do so, but wished to guard against being confused. (Laughter.)

Mr. Bulwer: You want to avoid the difficulties of the previous witness. (Laughter.)

Witness: Yes. (Laughter.) It was not proper to give the horse a bran mash. He should have given it bran and scalded oats.

Mr. Bulwer: Why?—If you give it to a horse once, particularly a young colt, you will never get him to eat it again. (Laughter.)

Come, now, I do know something about that. (Laughter.) Would you not give it to your horse after hunting?—No, I should give him boiled linseed, scalded oats, and bran.

Have you ever known horses refuse bran-mash?—Yes, hundreds of times.

Re-examined: I have operated on many horses—four in an hour.

This closed the case for the plaintiff.

Mr. Bulwer said it was not for the sake of saving the £45 that the defendant instructed him to defend this case, but to save his own personal character from the charges that had been made against it. Serjeant Ballantine's words in opening the case had not yet lost their effect on the minds of the Court. The defendant was accused, not merely of the grossest want of skill but of downright cruelty to a dumb animal. Serjeant Ballantine used those words, not, he firmly believed, from his own heart, not at the instigation of the solicitor, but at the desire of the plaintiff himself. It would have been sufficient to have alleged that defendant did not perform the operation with sufficient skill, and the result was the colt died; but he charged him not merely with want of skill, but want of humanity Serjeant Ballantine was eloquent on that point, and he (Mr. Bulwer) went with him in the eloquence that pleaded for tenderness and mercy to dumb animals. The plaintiff, who had received an attorney's letter from the defendant to pay his bill for his services as veterinary surgeon, was the man who made these charges against the defendant for the sake of the trumpery money. He (Mr. Bulwer) would now call before the jury the "lunatics"—(laughter)—gentlemen of undoubted

experience, and after they had heard their evidence, he trusted they would say this was an unworthy attempt to ruin the defendant's character, and to stigmatise him with having committed this crime, for the cruelty imputed to him, if true, would amount to nothing less. He trusted the jury would find that there was no foundation for the allegations which had been made. The plaintiff would have to submit to his loss through not having carried out the directions his client gave him. The defendant might have committed errors of judgment; so might a doctor attending a child; a doctor was bound to bring reasonable skill, but because he committed errors of judgment, he was not to be branded as an unskilful man.

The defendant, who holds titles of distinction in his profession, described his mode of treatment, and denied *seriatim* the charges of negligence and cruelty. He attributed death to inflammation of the peritoneum, produced by cold and, probably, improper diet.

In cross-examination he adhered to the propriety of his method of treatment, which in many features, was as described. He held a diploma from the College at Edinburgh.

His Lordship: Where were you taught to use tow as a plug?

Defendant: At the College at Edinburgh, my lord.

In reply to Mr. Jones, defendant said two colts had died at Mr. Philip Witlock's, after a similar operation had been performed by him. They died from cold.

Mr. Thomas Avis, hospital surgeon at the Royal Veterinary College, honorary surgeon of the Royal Medical College, etc., said the operation was performed in a properly correct way, and the diet defendant recommended was correct. It was most improper to give (as it was alleged the plaintiff had given) oats to a horse while it was suffering from the effects of the operation.

Mr. Bulwer: Do you agree with the remark that a horse which had eaten one bran-mash is not likely to eat a second?

Witness: Some horses do not care about bran-mash, but they are very scarce. It is proper treatment to give horses bran-mash after they have done hard work. Some of the pigs he attended at Mr. Unwin's, at Baythorne Hall, died; also lost a bull.

By Mr. Bulwer: There is the same amount of danger attending operations on animals that there is to human beings—some died.

Frederick Golding, in the service of the defendant, was called and deposed to having assisted his master in the operation; he denied the alleged cruelty.

Cross-examined by Serjeant Ballantine as to the way the searing irons were used, he said one was loose in the wooden handle; the other was all right.

William Shepherd Wallace, examined by Mr. Bulwer, said: I am a member of the Royal College of Veterinary Surgeons, and I have been in practice 40 years. I reside at Halstead. I have heard the evidence of defendant, and I think he performed the operation properly. The irons do not appear to have been used improperly. It is very common for the handle of the iron to become loose, and the remedy is to tap it on some hard substance. Even taking plaintiff's evidence to be correct about the heat of the colt, I do not think it was in an unfit condition to be operated upon. Assuming the operation had been successfully performed, the process of heating would be prevented if the horse, particularly a young colt of a lively nature, was allowed to run about. Had heard that some colts, after undergoing the operation, were apt to show a disposition to go about as before, but he was sceptical on that point. (A laugh.)

Serjeant Ballantine: The witness Martin said, "I saw the colt when brought back very hot and steaming." Would you have operated on it at the moment? (A pause.)

Witness : I should like to give you a straightforward answer, Sir.

Serjeant Ballantine : I want your opinion on the evidence you have heard.

His Lordship said the learned Serjeant must take the responsibility as to the correctness of his version of the evidence.

Witness (to Serjeant Ballantine) : You put it very strongly. It is a most difficult thing to answer.

Serjeant Ballantine : You have given straightforward answers hitherto, and I expect you to do so now.

Witness : You put the questions stronger than the circumstances justify.

That has nothing to do with it. Would you suppose it to be correct to perform the operation while the animal was in that state ?—No, I should not.

In reply to other questions, witness said it was impossible and impracticable to use the forceps in such cases. Never had a case in which bleeding from the spermatic artery was stopped with tow. Had had cases where arteries which could not be got at were stopped with tow. If the artery was not stopped with bleeding the animal would bleed to death. The only alternative, not being able to get at the artery, would be plugging in the way described. That would not necessarily produce mortification, but in many cases mortification would ensue.

Alfred John Shorten, examined by Mr. Digby, said : I am a veterinary surgeon practising at Ipswich. I am a member of the Royal College of Veterinary Surgeons. I have been in Court during this case and have heard the evidence. I consider the defendant's treatment was proper, both during the operation and subsequently. There is no objection to perform the operation while the animal is hot. It is seldom we castrate a colt that is not hot. They heat themselves in the act of being caught and cast. I agree with the last witness as to the propriety of plugging—nothing else could be done.

Cross-examined : I have performed the operation of plugging while there was a flow of arterial blood. It is a dangerous operation, but so far as my experience goes there is a reasonable chance of success.

Re-examined : The colt I operated upon was the property of Mr. Garrett, of Carlton Hall. It lived after the operation.

Mr. Charles Wright, veterinary surgeon, Ipswich, examined by Mr. Digby, concurred in the treatment the colt had received.

Cross-examined : The mode in which the plug was applied was quite right. It is the only method of stopping the hæmorrhage. I do not agree with Williams' book (assuming the word toxic means general poisoning) that blood poisoning would necessarily ensue.

Professor William Pritchard, of the Royal Veterinary College, examined by Mr. Bulwer, said he had never operated on a colt that was not in a sweat. The process of casting would put it in a sweat ; besides which colts struggled violently on such occasions and were greatly terrified if unsuccessful in their struggles. The older the animal the more difficult the operation. Anything calculated to excite the animal after the operation would be prejudicial. It should be kept quiet. It would not be wise to turn it into a large barn to frolic about with another colt. He should be sorry to allow a patient of his to do so. Bran-mash with a few oats was the proper diet, but only sufficient oats to entice it to eat. Should not object to perform the operation with the instruments produced. Assuming hæmorrhage ensued, he should plug the scrotum with tow, which would form a coagulum, that would prevent the flow of blood. Should not remove it until a coagulum was formed ; but it would be dangerous to leave it in a fortnight, as it might produce blood-poisoning. Three days would not be too long. Performed the operation of plugging successfully a little while ago, and taught his pupils how to do it.

On that occasion the plug was left in from Monday to Wednesday. About 70 out of 100 treated in this way recovered.

Mr. Bulwer and Mr. Serjeant Ballantine having addressed the jury,

Lord Justice Cotton summed up, leaving to the jury the question whether the death of the colt was attributable to negligence on the part of the defendant, and further whether the defendant's treatment would have led to the death of the horse if the plaintiff had treated it with reasonable care.

The Jury, after a very short consultation, found a verdict for the defendant.

Mr. Jones asked for stay of execution for defendant's costs for a week, but Lord Justice Cotton declined to grant it.

Army Veterinary Department.

Gazette, April 29*th*.

14TH HUSSARS.—Veterinary Surgeon D. C. Pallin, from the Royal Artillery, to be Veterinary Surgeon, *vice* Veterinary Surgeon, First Class, W. A. Russell, transferred to the Veterinary Department.

VETERINARY DEPARTMENT.—The undermentioned Veterinary Surgeons, on probation, to be Veterinary Surgeons dated Oct. 5, 1878 :—R. H. Ringe, C. E. Smith, G. H. Fenton, R. Pringle.

Gazette, May 16*th*.

VETERINARY DEPARTMENT.—The undermentioned gentlemen to be Veterinary Surgeons on probation :—Arthur Wilberforce Mason, in succession to Veterinary Surgeon S. T. Goddard, Royal Artillery, placed on retired pay. Edmund Day, in succession to Veterinary Surgeon, First Class, J. Ferris, Royal Artillery, placed on temporary half-pay. Charles Rutherford, in succession to Veterinary Surgeon, First Class, T. J. Lang, Royal Artillery, deceased. Edmund Woods Goldsmith, in succession to Veterinary Surgeon W. Oliver, Royal Artillery, retired upon half-pay. Kay Lees, on augmentation.

Gazette, *May* 23*rd*.

VETERINARY DEPARTMENT.—The undermentioned Veterinary Surgeons, on probation, to be Veterinary Surgeons :—Thomas Alexander Killick, John Burke Savage.

The undermentioned gentlemen to be Veterinary Surgeons on probation : —Francis Kennedy, on Augmentation ; Albert Douglas Drake, on Augmentation ; Frederick Walewski, on Augmentation.

Obituary.

WITH sincere regret we have to announce the demise of George William Varnell, for many years Professor of Anatomy and Physiology, as well as Clinical Instructor, at the Royal Veterinary College, London. This melancholy event occurred at Belton, Suffolk, on April 26th, in the seventy-third year of his age, and by it the profession has lost one of its most devoted and, at one time, active members. In early life we believe the late Professor dis-

played a great predilection for Veterinary medicine, and having acquired by observation some rudimentary knowledge of its more practical requirements, fortune led him to take up his abode in America, where he was so successful as to amass sufficient means to enable him to return to England, enter the Royal Veterinary College somewhere about 1843, and graduate in April, 1846—leaving behind him in the United States a good name. As a student he soon attracted the attention of Professors Sewell and Spooner, who were struck with his assiduity in anatomy; and he had no sooner graduated than he was appointed Demonstrator of Anatomy—an office in which he rendered good service, as an efficient teacher was then sadly required. His quiet demeanour and genial manner of addressing students soon made him a general favourite; consequently, we need not wonder that presentations from the students were made to him more than once, all of them useful and valuable. After some twenty-four years of close labours, but unfortunately not always congenial companionship in collegiate duties, Professor Varnell retired in 1867 to the place where he died.

As an anatomist, Varnell was fully competent to teach students the anatomy of the horse—or rather ass, the animal chiefly dissected at Camden Town. His map of the arteries of the horse testify to his knowledge of the subject; and with the crayon we are assured that he was more than an amateur in sketching anatomical outlines. As an operator he was not surpassed at the school, possessing, as he did, coolness and tact, and a good idea of surgical anatomy; while as a clinical instructor he was most painstaking and very successful.

Professor Varnell was much respected by the Veterinary profession, and took much interest in its welfare. In 1865 he was elected President of the Royal College of Veterinary Surgeons, and he also served as Vice-President. When the Fellowship Degree was conferred, he was the only teacher of the Royal Veterinary College who elected to be nominated a foundation Fellow, thus honouring the degree by allowing the honour to be conferred upon him. On severing his connection with the London School, a very costly and elegant testimonial was subscribed for and presented to him by a large number of professional friends.

At his funeral on May 2nd, a deputation of Veterinary Surgeons representing the profession and the Eastern Counties Veterinary Medical Association, attended to pay their last sad tribute of respect to the memory of one whose distinguished professional attainments were manifested not only in his teaching, but in the papers he at various times contributed for the instruction of his colleagues.

Notes and News.

CONTAGIOUS DISEASES IN THE UNITED STATES.—A Bill introduced into the United States Senate appropriates a sum of £52,083 6s. 8d. for the purpose of stamping out contagious diseases among cattle in that country. It proposes to investigate all contagious diseases among stock, and to slaughter all animals infeeted with Pleuro-pneumonia. The report of the Agricultural Department states that the returns for the month of April show that the farm animals are in unusually good condition, and that no virulent disease now exists, excepting Hog-cholera in the West, and Pleuro-pneumonia in six of the Eastern States.

ELECTRICITY IN HORSE TRAINING.—We find from our French contemporary, *La Nature*, that the General Omnibus Company of Paris has for

some time past made use of electricity for subduing vicious horses. At a recent *séance* of the National Society of Agriculture, M. BELLA gave some interesting details on the subject. By the process adopted, intractable animals given to biting, rearing, kicking, &c., are rendered inoffensive, and submit peaceably to be groomed and harnessed. To obtain this result a weak current of electricity is passed into the mouth of the horse each time it becomes restive. The will of the animal seems almost annihilated. The current is produced by a small induction machine, of the CLARKE system, the wires of which communicate with the bit of the bridle. The idea of controlling horses by electrical means found expression in the Exhibition last year; in the Swedish section was an apparatus with this object. It consisted of a small box containing a battery, the wires of which communicated with the bit by the reins. In the case of resistance by the horse, the driver had merely to push a button, when a current passed immediately, and the animal became docile. The employment of electricity is said to produce a sort of uneasiness or torpor, rather than pain, and is much less barbarous than many taming methods hitherto adopted, such as those which depend on weakening by deprivation of food, on fatigue, &c.

ACORNS AS FOOD.—Some practical uses to which the acorn may be turned are detailed in the *Deutsche Landwirthschaftliche Presse*. One and a quarter pound of acorns were added to the usual daily food of a cow and a goat, for the period of six weeks, at the end of which time neither of the animals had lost condition, but were as well as when fed on oilcake, and the milk and butter they produced tasted better and had a better colour than when the latter article of consumption had been used; and they do not seem to have been injurious to the process of chewing the cud. Care must be taken that they are perfectly ripe when gathered, and cooked with the food. These few hints are given us by a Herr Kost, who has had twenty-five years' experience of this method.

AN UNUSUAL CASE OF RABIES.—In the Austrian journals the Freiherr von Hourichs publishes some particulars of a case of rabies in a foal that came under his notice in January last, near Boskowitz, in Moravia. The animal, a two-year-old roan, of Wallachian-Norfolk breed, was bitten in the nose by a rabid dog, about the middle of July, 1878. It was at once separated from the other stock, and kept under close observation for the period of four months, as enjoined by the Austrian law. At the end of that time, as not the slightest symptom of disease had appeared, it was re-admitted to the company of its fellows. More than six months after the bite, the colt was noticed one day to be restless, and constantly rubbing the nose on the seat of the old injury. It was at once isolated. Very shortly, hurried pulse and breathing were observed, the appetite was irregular, swallowing liquids became extremely difficult, the animal recoiled with apparent horror from the water pail, the excrements were scanty, and their passage painful. On the doors of the stable being opened the unfortunate patient uttered inarticulate sounds, more like shrieks than a horse's neigh. It ate its own dung, bit deeply into the woodwork, and slobbered saliva freely. Half an hour before death gnashing and grinding of the teeth began, the paralysis of the hinder quarters set in. From the first appearance of the first symptoms to the time of death occupied a period of three days; the decomposition of the carcase set in in a few hours, though the weather at the time was cold and frosty.

HOW TO CLEAR COWSHEDS AND STABLES OF FLIES.—The *Breslauer Landwirth* notices a variety of methods by which this desirable object may be accomplished. One good plan is to place small dishes of chloride of lime

immediately under the roof, and frequent lime-washing of the walls is also said to be of great assistance. Another method consists in the employment of a preparation composed of 120 parts of Dalmatian insect powder, two parts of finely divided sulphur, and two parts of Lycopodium. The mixture should be kept in a pig's bladder furnished with a quill nozzle, and a little of it sprinkled from time to time where the flies set thick together in the early hours of the morning. Its poisonous effect upon them will be made evident in a very few minutes. A cheaper plan consists in suspending a small bundle of mugwort or motherwort *(Artemisia vulgaris)* or a small willow bush, from the ceiling of the room, kitchen, or stable, when the flies, apparently attracted by the smell, will settle upon it in great numbers as evening sets in. A wide-mouthed bag is then held immediately under the bundle, and the string which suspends the latter suddenly cut through with sharp scissors. The bundle with its load of flies falls into the bag, and can then be destroyed by fire or water, or other convenient means. A still further plan is to fumigate the rooms with dried rotten cow dung, which should be allowed to burn slowly in a pan of glowing charcoal. Flies appear to be utterly unable to support its pungent odour, and if the doors and windows are now thrown open will hasten to make their escape through them. The same holds good also of moths, gadflies, wasps, and many other undesirable visitors belonging to the insect world.

DISINFECTION OF STABLES DURING INFLUENZA.—The Prussian Ministry of War has just issued a general order relative to the precautions to be adopted in outbreaks of influenza among the horses in military stables. The chief points insisted on are as follows :—So far as the condition of horses which cannot be removed will admit of it, all such stables must be thoroughly ventilated and scrupulously cleaned. The walls and roofs, so far as they consist of wood, the iron-work, and the flooring must be scrubbed with hot water and soap ; lime-washed walls must be gone over afresh, and the flooring strewed with gypsum. When still more vigorous measures are required, the following is the plan of procedure to be acted on :—The horses being first removed, pans of sand holding bottles containing 250 grammes of bromine are to be placed about the stables, in the proportion of one pan and bottle for each 18 cubic metres of capacity. All openings being closed, the bottles are to be quickly upset, so that their contents run into the pans of sand, and the operator, making his escape as quickly as possible, closes the door carefully behind him. In twenty-four hours' time the stables may again be opened, and, after they have been thoroughly ventilated for twelve hours, the horses may be re-introduced. Such iron fittings as are not fixtures should be removed before the process of disinfection commences, so as to prevent their rusting. Horse clothes and harness should be left in the stables while the disinfection is proceeding, but when the stables are again opened they must be well beaten and thoroughly aired. Fixed ironwork must also be cleaned and polished. Where bromine is not employed, all harness and fixtures must be aired and cleaned as thoroughly as possible.

THE "LUPINE SICKNESS" OF SHEEP.—Pending the inquiry into the causes and means of prevention of this now prevalent disease, which it has been suggested should be undertaken by the Prussian Ministry of Agriculture, reports of its occurrence in many different parts of Germany continue to appear in the various agricultural journals of that country. Among the latest of these is one furnished to the *Hannoversche Landwirthschaftliche Zeitung*, by Herr Grütter, of Memsen. Of the 750 sheep of which his flock was composed, 450 received lupine, and the other 300 did not. In about two days after the lupine-feeding had commenced all the first division fell ill, they lost appetite, suffered from constipation and irritation of the bladder, and their eyes

assumed a peculiar yellow colour. On the fourth and fifth days thirty-three of them died, and altogether 58 were lost. The other 300 sheep, which had received no lupine, remained perfectly healthy. An examination of the lupines that had thus proved deleterious, and of some of another sort grown upon a different part of the same field, was thereupon undertaken by M. Meyer, of Hassal. The first variety was found to contain a large quantity of poisonous fungi, while the second was quite free from them. Experiments in feeding were then made with the second variety, and in no case had they any injurious effect on the sheep to which they were given. Both crops of lupines had been got in in good dry condition, and it is further stated that the sheep had been folded on about eight acres of the poisonous lupines while they were still in the green stage, without sustaining any injury.

Parliamentary Intelligence.

House of Commons, May 8th.

AMERICAN PIGS.

Mr. KING-HARMAN asked the Vice-President of the Council whether he was aware that the disease known as Trichina Spiralis was reported to be extremely prevalent among the American pigs, large numbers of which were now being imported into this country; whether he had heard that in a recent consignment delivered at Wolverhampton, sixteen out of the three hundred pigs were found dead in the trucks, while four more dropped dead immediately afterwards, and that the whole of these twenty were found to be full of the Trichina worms; and whether he would take measures to prevent the horrible malady of Trichinosis being disseminated by the free importation of such diseased animals.

Lord G. HAMILTON.—The Government have not received any information of swine affected with Trichinosis having been landed in this country from the United States, but a cargo of swine, among which the disease known as Typhoid Fever existed, was landed at Hull, on April 25, and were permitted by the Inspector of the Privy Council to be removed from the landing place. Some of the swine were seized by the sanitary authorities in Hull and a large number were sent on to Birmingham, the authorities of which town had been informed by the Hull local authority of the destination of the animals. The inspector at Birmingham reports that all the swine have been slaughtered. The inspector who examined the animals on landing has been dismissed. Owing to the prevalence of Typhoid Fever among the swine in the United States and the number of diseased cargoes arriving here, by an order in Council American swine must be slaughtered at the port of debarkation.*

May 12th.

PLEURO-PNEUMONIA IN AMERICAN CATTLE.

Mr. MUNDELLA asked the Vice-President of the Council if he was aware that Professor W. W. Williams, of the Edinburgh Veterinary College, had written a letter to Dr. Laidlaw, veterinary pathologist of Albany, New York,

* There is every reason to believe that quantities of pork, and also numbers of live pigs infested with Trichina, are imported from America to this country. We may also expect, and indeed have already had, invasions of Swine Plague from the United States.

denying in the most emphatic terms that pleuro-pneumonia had existed in any cattle hitherto imported from the United States; whether his attention had been called to a letter of Professor Williams, dated 29th of March, in which the following passage occurred:—"Since first arrival of Ontario with cattle others have arrived at Liverpool, and I have examined the lungs said by Privy Council inspectors to have pleuro-pneumonia, and satisfied all who have seen them that no pleuro-pneumonia has arrived here from America; indeed, everybody is surprised that such a gross mistake should have been made. The last lot—seven in number—examined by me had bronchitis, with collapse of the lung, but not a trace of pleurisy nor of pneumonia, yet they were declared by the authorities in London to have typical pleuro-pneumonia. I have the specimens most carefully preserved, and am ready to show them to the whole world if necessary;" and what steps he proposed to take to satisfy himself of the correctness of those statements.

Lord G. HAMILTON replied that a statement of Professor Williams was forwarded to the Privy Council Office by the Canadian Government last month, and upon receiving it the Privy Council requested Professor Brown, the head of the Veterinary Department, to investigate the subject. He would read the memorandum which he had drawn up, and which was sent in reply to the Canadian Government:—

"On January 26, the steam ship Ontario arrived at Liverpool, having on board 195 cattle and two carcases; 87 head of cattle had been thrown overboard, making the total number shipped 284. On examining one of the carcases, the inspector at Liverpool found evidence of pleuro-pneumonia, and forwarded portions of the lung to the Veterinary Department. This specimen was found to represent the characteristic indications of the contagious pleuro-pneumonia of cattle so well known in this country. By direction of the Lord President I immediately instructed Mr. Duguid, one of the inspectors of this department, to proceed to Liverpool and report as to the condition of the animals which had been detained there. Mr. Duguid remained at Liverpool and superintended the slaughter of the cattle, and in the course of the *post-mortem* examination he detected thirteen cases of pleuro-pneumonia in various stages. Since the landing of the cattle from the Ontario in January, cases of the disease have been detected among cattle from the United States by the inspector at Liverpool in three other cargoes, and in one cargo by the inspector at the Foreign Cattle Market, Deptford. Portions of the lungs taken from the diseased cattle were forwarded by the inspectors to the Veterinary Department, and I took the opportunity of submitting some of the specimens to the inspection of several expects who have made pleuro-pneumonia of cattle a subject of special inquiry, and they were unanimous in their expression of opinion that the morbid changes were indicative of contagious pleuro-pneumonia. I may add that the alterations which are apparent in the lung structure in contagious pleuro-pneumonia, even in the earliest stages, are so different from those which occur in any other affection of the lungs of the ox, that no competent pathologist would experience any difficulty in arriving at a correct conclusion as to the nature of the disease.

He might add that since the date of the report six cargoes of cattle from America had been landed at Liverpool and Deptford in which contagious pleuro-pneumonia had been found to exist.

May 22nd.

ARMY VETERINARY DEPARTMENT.

In reply to Col. Arbuthnot, Col. Stanley stated that no decision had yet been arrived at in regard to the amendment of the Veterinary Warrant of May 1, 1878.

Correspondence, etc.

A REMINISCENCE OF THE ANNUAL MEETING, MAY 5TH, 1879.

To the Editor of the VETERINARY JOURNAL.

SIR,—Another annual gathering or reunion has passed. The report of the year's labour of the President and his Councilmen has been submitted to the profession, and well might the report have closed with the remark, "*Nous avons donné à penser.*"

The gathering in the Council Chamber (numbering some 102 members) was not so numerous as is usual, many provincial men of promise being absent, doubtless due to the only object they have in attending the meeting being performed through the Post-office. Of metropolitan men there was, I suppose, about the usual fair complement. It is, however, much to be regretted these reunions are not more fully attended—that, in other words, the members do not display more interest and enthusiasm in the government of the profession; such display would doubtless materially aid us in the obtainment of a suitable edifice for our College, by proving the very inadequate accommodation for such numerous gatherings "of the representatives of so noble and important a profession to the Commonwealth."

It must, however, be a source of satisfaction to earnest members to hear there is a possibility of a new building being acquired before our next gathering. Equally pleasing must it be to know that all differences between the College and the Highland Society have been satisfactorily adjusted, and that we may anticipate the tranquillity of a permanent calm.

The discussion on bye-law 37 has led me to think that, as the Royal College is at present related to the Royal Schools and those not Royal, the clause should never have had existence; for as matters are now conducted, any man who can answer a few School Board queries, and do the principal sum set him, *i.e.*, count out correctly the amount of the College entrance-fee, these two desiderata being all that is demanded from the intending student, neither character nor introduction being deemed necessary. This being so, should our Royal College of Veterinary Surgeons sympathize with the schools by refusing to examine these students but three times, then send them forth as *pirates* on the *qualified*—for these men make the worst kind of professional parasites, and can moreover assert that they were only permitted to go up three times, and that after spending all their money, they were cast adrift to starve, or eke out a livelihood as quacks. Again, the medical profession is open to students as often as they choose to pay examination fees and obtain the necessary certificate of attendance, etc.—in fact, I believe it to be the rule in all other professions to permit the student properly furnished, with an order and cash, to apply for a ticket as often as he may think fit. I should certainly not extend my sympathy to any school that might gorge itself with vicious, lazy, or profligate young men; if the schools think proper to accept the lucre of these men, they should certainly be made to suffer, and to either refund them their money or submit to their presence.

The R.C.V.S. examiners should certainly examine them on the fees being paid and certificate of school produced, and pluck them as often as they come; then, should the candidates sicken of attempts, and start on empirical careers, the qualified men would have them quite in hand, and could say that, if they knew their duties they could easily prove it, as the examiners were always ready to grant them the diploma if competent.

Such unfortunate young men as Mr. Wallis's son would then have no cause to petition the College, in a manner most unusual and ill-advised; for if such be sanctioned, when and where will it cease.

Whilst the preliminary examinations are conducted by the schools the 37th bye-law would, being repealed, exercise a salutary influence, and make the professors inspect their freshmen before admission, as is the custom in the army, police, shoeblack-brigade, etc. But as soon as the R.C.V.S. have their legal duties imposed on them, then I go over to the schools, and by no means would I wish to see them obstructed or blocked by useless masses of human flesh, the accumulation of which arose from causes out of their control.

There is an old maxim—

"De mortuis nil nisi bonum,"

which, if it had been remembered at the moment by a sage member, much pain to others might have been saved; if in former times such conduct as he referred to did take place, at this present it would not for one moment be tolerated, and doubtless it was a "lapsus linguæ," for I will not have it said, "son langue est son épée, et il ne la laissent pas rouiller."

It is well for us if we can, without fear, look on death as a certainty, and be led to anticipate it, for we have been told by an old and wise man, to "familiarise yourself early with death . . . . it is only dreadful for those who dread it!"

"Far happier are the dead, methinks, than they
Who look for death, and fear it every day."

Death has been busy in our ranks this year, sixty-one members having passed from our midst, the last being an old and familiar friend to many members—Professor Varnell—esteemed and deeply lamented by all. To fill this wide gap we have sixty-nine new members, and it is to be hoped that among them will be found those equal to our losses, our expectations being good, from report of examiners.

The issue of the annual report a few days before the meeting will certainly allow the whole body of members to know its contents earlier, and if our journals make better use of the space usually allotted to reprint of the report, there cannot be any very strong objection to the cost of printing so many and the postage?

The financial report of the Treasurer appearing satisfactory, the meeting dissolved.

The dinner this year, as last, took place in Freemasons' Tavern, more than seventy members and friends to the craft being present. It was expected many more would have attended, as the very interesting ceremony of presenting the Fleming Testimonial was to take place.

The President, General Sir Frederick Fitzwygram, Bart., occupied the chair, supported by several military friends, General Shute, Colonel Ewart, 2nd Life Guards, Colonel Kingscote, C. N. Newdegate, Esq., M.P., etc

The usual loyal toasts having been suitably proposed and honoured, the toast of the Schools was responded to by Professors Simonds and Williams, the former delivering an inexhaustive address on the St. Pancras School arrangement, especially the novel means of instruction in cattle pathology. Sick cows, invalid bulls, neat cattle and sheep labouring under various forms of disease are not to be found at cattle-markets, or a fair knowledge of morbid anatomy obtained by witnessing the butcher operate; so that the history of a case, should one be discovered there at times, would be *found* of importance. It is useless; you cannot shuffle a knowledge of cattle pathology into students in any other field (Copenhagen included) than the broad *field of actual practice*. The sheds, byres, and pastures wherein the animals are kept must be visited, cases of all kinds watched to make the young men sound practitioners—superficiality will never answer—time must be spent with a

practitioner in the country, until such time as the College acquired "a College Farm." The Royal Agricultural Society should demand this, and the sooner the better.

Colonel Kingscote, replying for the R.A.S., spoke of the forthcoming show at Kilburn, the largest and most varied ever held, to which no doubt every member will pay a visit.

Mr. Newdegate, replying on behalf of the governors of the R.V.C., spoke of their desire to promote and advance the science of veterinary medicine, and of his long family connexion with the College, a guarantee, if one is needed, of his deep and lively interest in the profession.

Colonel Ewart, in proposing the Army Veterinary Department, spoke in the highest praise of the improvements in all branches of this service, as well as in the veterinary officers.

The speech of the evening was that of General Shute, who, in terms of praise, spoke in the most choice language of the vast strides made in all branches of the profession, and hoped such would continue.

The Presentation.

The President called on T. Greaves, Esq., to present G. Fleming, Esq., with the handsome testimonial subscribed for by members of the profession, as a cheering reminder from them that he in his workshop was not forgotten by them, and that they enjoyed the fruits of his labour in his sanctum. Mr. Greaves—moved deeply by inward emotion, spoke feelingly the written address he had prepared for the occasion, working in impressive, familiar quotations from various works of leading authors, to relieve his own words—presented the testimonial, which consisted of an elegant chiming hall-clock, of first-class manufacture, by a well-known maker, and a purse containing 300 sovereigns. Mr. Fleming, in a most natural, easy, although slightly emotional manner, thanked his friends, the subscribers, for this mark of their esteem of him and his labour in the cause of veterinary literature, to accomplish which it had necessitated him to apply himself, firstly, to the study of languages; this task over, then the literary work began, and now this moment was the happiest and proudest of his life—to know his self-imposed tasks had been the means of placing himself in the proud position he was that evening; he should, he said, ever continue in his work as long as health permitted, and until the silver cord had snapped, when he must put down the pen, till then he was a sincere worker in the profession's cause.

Mr. Fleming on resuming his seat was most heartily cheered.

The evening was most enjoyably passed, and those who were not there missed a professional reunion treat.

May all meet again next year in full health and prosperity, with all party differences adjusted and buried for ever, so that no more opprobrious remarks may be cast at us and our motto, but that "*Vis Unita Fortiori*" shall be our motto, indeed, is the earnest wish of

Your obedient servant,
"Artemus Secundus."

London, *7th May*, 1879.

VETERINARY POLITICAL HISTORY.

To the Editor of the Veterinary Journal.

Sir,—In reading the report of the meeting of the Lancashire Veterinary Medical Association, published in this month's Veterinary Journal, I observe that the President, in his inaugural address, makes abundant reference

Whilst the preliminary examinations are conducted by the schools the 37th bye-law would, being repealed, exercise a salutary influence, and make the professors inspect their freshmen before admission, as is the custom in the army, police, shoeblack-brigade, etc. But as soon as the R.C.V.S. have their legal duties imposed on them, then I go over to the schools, and by no means would I wish to see them obstructed or blocked by useless masses of human flesh, the accumulation of which arose from causes out of their control.

There is an old maxim—

"De mortuis nil nisi bonum,"

which, if it had been remembered at the moment by a sage member, much pain to others might have been saved; if in former times such conduct as he referred to did take place, at this present it would not for one moment be tolerated, and doubtless it was a "lapsus linguæ," for I will not have it said, "son langue est son épée, et il ne la laissent pas rouiller."

It is well for us if we can, without fear, look on death as a certainty, and be led to anticipate it, for we have been told by an old and wise man, to "familiarise yourself early with death . . . . it is only dreadful for those who dread it!"

"Far happier are the dead, methinks, than they
Who look for death, and fear it every day."

Death has been busy in our ranks this year, sixty-one members having passed from our midst, the last being an old and familiar friend to many members—Professor Varnell—esteemed and deeply lamented by all. To fill this wide gap we have sixty-nine new members, and it is to be hoped that among them will be found those equal to our losses, our expectations being good, from report of examiners.

The issue of the annual report a few days before the meeting will certainly allow the whole body of members to know its contents earlier, and if our journals make better use of the space usually allotted to reprint of the report, there cannot be any very strong objection to the cost of printing so many and the postage?

The financial report of the Treasurer appearing satisfactory, the meeting dissolved.

The dinner this year, as last, took place in Freemasons' Tavern, more than seventy members and friends to the craft being present. It was expected many more would have attended, as the very interesting ceremony of presenting the Fleming Testimonial was to take place.

The President, General Sir Frederick Fitzwygram, Bart., occupied the chair, supported by several military friends, General Shute, Colonel Ewart, 2nd Life Guards, Colonel Kingscote, C. N. Newdegate, Esq., M.P., etc

The usual loyal toasts having been suitably proposed and honoured, the toast of the Schools was responded to by Professors Simonds and Williams, the former delivering an inexhaustive address on the St. Pancras School arrangement, especially the novel means of instruction in cattle pathology. Sick cows, invalid bulls, neat cattle and sheep labouring under various forms of disease are not to be found at cattle-markets, or a fair knowledge of morbid anatomy obtained by witnessing the butcher operate; so that the history of a case, should one be discovered there at times, would be *found* of importance. It is useless; you cannot shuffle a knowledge of cattle pathology into students in any other field (Copenhagen included) than the broad *field of actual practice*. The sheds, byres, and pastures wherein the animals are kept must be visited, cases of all kinds watched to make the young men sound practitioners—superficiality will never answer—time must be spent with a

practitioner in the country, until such time as the College acquired "a College Farm." The Royal Agricultural Society should demand this, and the sooner the better.

Colonel Kingscote, replying for the R.A.S., spoke of the forthcoming show at Kilburn, the largest and most varied ever held, to which no doubt every member will pay a visit.

Mr. Newdegate, replying on behalf of the governors of the R.V.C., spoke of their desire to promote and advance the science of veterinary medicine, and of his long family connexion with the College, a guarantee, if one is needed, of his deep and lively interest in the profession.

Colonel Ewart, in proposing the Army Veterinary Department, spoke in the highest praise of the improvements in all branches of this service, as well as in the veterinary officers.

The speech of the evening was that of General Shute, who, in terms of praise, spoke in the most choice language of the vast strides made in all branches of the profession, and hoped such would continue.

The Presentation.

The President called on T. Greaves, Esq., to present G. Fleming, Esq., with the handsome testimonial subscribed for by members of the profession, as a cheering reminder from them that he in his workshop was not forgotten by them, and that they enjoyed the fruits of his labour in his sanctum. Mr. Greaves—moved deeply by inward emotion, spoke feelingly the written address he had prepared for the occasion, working in impressive, familiar quotations from various works of leading authors, to relieve his own words—presented the testimonial, which consisted of an elegant chiming hall-clock, of first-class manufacture, by a well-known maker, and a purse containing 300 sovereigns. Mr. Fleming, in a most natural, easy, although slightly emotional manner, thanked his friends, the subscribers, for this mark of their esteem of him and his labour in the cause of veterinary literature, to accomplish which it had necessitated him to apply himself, firstly, to the study of languages; this task over, then the literary work began, and now this moment was the happiest and proudest of his life—to know his self-imposed tasks had been the means of placing himself in the proud position he was that evening; he should, he said, ever continue in his work as long as health permitted, and until the silver cord had snapped, when he must put down the pen, till then he was a sincere worker in the profession's cause.

Mr. Fleming on resuming his seat was most heartily cheered.

The evening was most enjoyably passed, and those who were not there missed a professional reunion treat.

May all meet again next year in full health and prosperity, with all party differences adjusted and buried for ever, so that no more opprobrious remarks may be cast at us and our motto, but that "*Vis Unita Fortiori*" shall be our motto, indeed, is the earnest wish of

Your obedient servant,

"Artemus Secundus."

London, 7*th May*, 1879.

VETERINARY POLITICAL HISTORY.

To the Editor of the Veterinary Journal.

Sir,—In reading the report of the meeting of the Lancashire Veterinary Medical Association, published in this month's Veterinary Journal, I observe that the President, in his inaugural address, makes abundant reference

to the "political aspects of the profession," and to its past history; though he confessed he could not speak with any confidence or authority on this subject, and begged to be corrected by those present if he made a mistake. As he undoubtedly erred, through his inacquaintance with the history of certain events, and as no one ventured to correct him, I hope you will afford me space to set him right, and especially as his remarks are not only erroneous but injurious. In the first place, he asserts that up to the last two years the provincial members of the profession were unrepresented in the Council. I need but refer to the list of members of Council for the last ten years, or more, to prove the incorrectness of this assertion. The statement that "few changes took place in the Council chamber, and the only new blood infused into this semi-fossilized body was the access of a Metropolitan practitioner. . . . or the election of an Army Veterinary Surgeon, who, from his position in life, was not acquainted with the requirements of the general practitioner, nor capable of representing him at the Council Board," is as unfair and unfounded as can be, and I am more than astonished at the audacity with which it was made. I say nothing for the Metropolitan practitioners; but for the Army Veterinary Surgeons I do maintain that the assertion has not a shadow of fact to support it. If Mr. Dacre will read or inquire, he will find that but for the Army Veterinary Surgeons on the Council, the Royal College would to-day have been non-existent. It was they—in fact, it was yourself, sir, who first put an end to that odious system of brow-beating which had been so successfully practised by the late Professor Spooner, whenever any project for the improvement of education was mooted. It was mainly, or indeed entirely, through the exertions of these gentlemen that the London school did not obtain a charter which was doubtless intended (though not by the Governors, who were honourable gentlemen) to destroy our corporation; and it was also chiefly, if not entirely, owing to them that the Highland Society was unsuccessful in its application for another charter, which would have split our small body into two miserable competing fragments cutting each other's throats, as the schools are doing at present. It was mainly by the exertions and perseverance of the Army Veterinary Surgeons on the Council that the new charter was obtained for the Royal College—a charter which has conferred the power of voting by proxy, of which Mr. Dacre makes so much. In all this, and very much more, the profession is but little indebted to the provincial practitioners, or indeed to many of the civil practitioners; and if the President will look at the committee and other work of the Royal College, he will certainly find that by far the largest share of it falls upon the army men, and has done so for years. If Mr. Dacre will spend a few hours in reading the history of the profession, and in a little reflection thereon, unless he suffers from that peculiar mental obliquity which his address leads me to suspect he does, he will not fail to convince himself that the Army Veterinary Surgeons have been far better acquainted with the requirements of the profession as a body, and the general practitioner as an individual, than the latter has, and have done far more for the benefit of the entire corporation.

As for the discontinuance of the examination of the Highland Society, and the amalgamation of the London and Scotch schools (which is nonsensical talk, as no one ever desired such amalgamation, and it will never occur) being effected by some Lancashire man, this is no more correct than the other assertions.

The discontinuance of the certificate system of the Highland Society only became possible when the obtainment of a charter by that Society became impossible, through the strenuous and long-continued opposition of the Royal College of Veterinary Surgeons and those graduates of the Scotch schools who were from the first loyal to their profession. The certificate system was played out and collapsed, and would have been so long ago had

not Lancashire men—members of the Royal College—given it their support, and the Principals of the Edinburgh schools countenanced it and allowed their pupils to patronise it. I do not deny that Lancashire has not had a share in the demolition of the certificate issuing; indeed, the great industrial city of Manchester has witnessed much professional agitation at times, and notably in September, 1867, when Professors Williams and Dalzell attended a meeting of the Association over which Mr. Dacre now presides, in order to urge it to support the application for a charter for Scotland, and thus effect disunion. But the Association was more loyal than the two Edinburgh professors, who had to return to the Scottish capital to continue their canvassing there. Mr. Dacre's account of the "consummation" which has now been effected must be pronounced as mythical and untrustworthy as the foregoing statements; at least, it is as different to the truth as the latter is to romance. I have a great respect for the President of the Lancashire Veterinary Medical Association, but in this instance I do not hold his powers in narrating history or fact in very high esteem. I beg he will accept the corrections I offer with the same good feeling with which they are tendered, and that you will permit me to designate myself by an old motto, as

Yours obediently,

May 3, 1879. "FIAT JUSTITIA, RUAT CŒLUM."

WORK AND PAY IN INDIA.

To the Editor of the VETERINARY JOURNAL.

DEAR SIR,—"Under instructions by telegram from Army Head-Quarters, Simla, first-class Veterinary Surgeon R. Poyser, 'The Carabineers,' is directed to proceed at once to Peshawur, and inspect all Dâk horses on the Grand Trunk Road between that place and Rawal Pindee, for Glanders." Now the above officer will, in all probability, have to continue his inspections into Afghanistan, and will eventually find himself pretty near the front line of warlike operations. He has been selected for this special kind of service in connection with various epizootic affections three times since October last, and whilst he fully appreciates the favour of the selection, he deplores the pecuniary loss he has so often suffered. After his second tour he applied for expenses, and his Excellency the Commander-in-Chief in India actually and flatly refused them, though they were forcibly represented and recommended by the Principal Veterinary Surgeon. To say the least of it, it is bad treatment, and not conducive to keeping up the standard of the Veterinary profession in the service. As you said in an editoral, "there is a premium on laziness and incompetency," and those who will or can work may do so, and live at hotels and pay for the means of locomotion, suffer wear and tear of body and mind, and clothes also, and receive no more than the miserable pittance that will only just stave off hunger and thirst, and hide the nakedness of the body, in a quiet home.

All moves entail expenses; and Mr. Poyser naturally and justly objects to bear them *pro bono publico*. The Home Government is liberal enough to give 7s. 6d. per day on the march, and police officers of one month's service in India can travel about their districts every day of the month and receive 8s. extra pay per day; and yet veterinary surgeons are forced hundreds of miles from their homes to slave for the State and bear the extra expenses themselves, to say nothing of the excessive heat. Its all "rot," sir. Warn the profession.

Yours truly,

"A PERIODICAL MARTYR."

THE "FELLOWSHIP DEGREE."

To the Editor of the VETERINARY JOURNAL.

SIR,—I am sure you know the object I have in view too well to permit the remarks of your correspondent, Richard S. Reynolds, in your last month's issue to pass unchallenged, for another reason also, your correspondent being a member of Council. Now it has always been my custom to avoid personality or individuality in my writing, and strictly to observe silence; for no good has or ever will emanate from splenetic or vindictive writing. Therefore silence is advisable, for we are told that "*Le silence du peuple est la leçon des rois.*"

In vol. iv., pp. 465, 6 of your Journal, will be found the views I held on the educational test for the degree prior to my examination, and these views I still hold and maintain; but I do object to a continual diminution of the educational test, and rather than witness the continual hacking at the bye-law No. 50, I would prefer the "obnoxious" bye-law expunged, and a test for "sound common sense" substituted in lieu thereof. For if the candidate possesses a fair amount of this rather un-common sense, combined with integrity, he, I opine, will prove a better Fellow than the pedantic man.

The expletives intended, no doubt, by Mr. Reynolds to cast clouds over those who have obtained the degree, fail; but they hang over those gentlemen who constituted the Board of Examiners; and I am grieved to know from one of the Council that those who have passed are so deficient in their educational attainments. Our Council should avoid this.

In No. 32, vol. iv., p. 111 of the Journal, the candidates are complimented. Surely there is something beyond professional *esprit* and *morale* at work in the mind of Mr. Reynolds, which is to be deeply lamented; for although he is to me a perfect stranger, I am assured he is an earnest and good member of our craft. It is, however, to be hoped that with time's soothing influence he will be brought round to professional emulation, and taste the examination himself by going in for the degree.

During the long period of twenty-four years passed by me in the profession, I have watched with feelings of delight its gradual rise in public estimation—the labour of the few, not the *many*, tending to develop all this; and those who have done so well desire to mark *those* who assist to maintain the integrity of the profession, by raising the higher standard,—to mark those labourers: thus we have the *Fellowship Degree.* Surely no member, good and true, will now raise a barrier to its immediate success.

My estimate of the title of Member or Fellow is little indeed in a pecuniary point of view, and my love for the "profession" can alone appraise its value to me, while my desire is to help to the utmost to raise it. Hoping now that remarks anent the degree will be confined to their proper quarter—the Council Chamber of the R.C.V.S.—and to see Mr. Reynolds a Fellow,

I am, yours truly,

ROBERT WARD, F.R.C.V.S.

London, W.

PARTURIENT APOPLEXY IN COWS.

To the Editor of the VETERINARY JOURNAL.

SIR,—I wish, with your kind permission, to ask some of those gentlemen who are dissatisfied with their present treatment of this perplexing disease,

to try the hypodermic use of Ergotin; and, further, to ask them to report the results through your excellent Journal.

Having, like most practitioners, experienced frequent disappointment at the adverse issue of the disease, under the many known methods of treatment, I was, about a year ago, led to adopt the exhibition of ergot, by a consideration of the records of its physiological and therapeutical actions. For some time I administered *pulvis ergotæ* or *liquor ergotæ*, "*per vias naturales*," but in the established disease the results were not encouraging. Where, however, the *pulvis ergotæ* had been added to the ordinary "drink" given immediately after calving, no case of Parturient Apoplexy has come under my notice; but whether this can be ascribed to mere coincidence or to ergot as a prophylactic, I do not pretend to say. The failures, although discouraging, I suspected might be due either to the uncertainty of the action of these preparations of ergot—as they are often found bad and inert, or to a retarded digestive and absorptive activity, consequent on the disease. I then resorted to the hypodermic injections of the active principle of the drug, giving from 25 to 30 grains of Ergotin—taking care to inject deeply into the muscular structure to prevent after mischief—and repeating the dose, if necessary, in ten or twelve hours. The other treatment consisted of counter irritants, catheterism, enemeta, etc., etc., with, where deglutition was not much impaired, the exhibition of a saline purgative. This treatment has, so far, in the limited number of cases in which it has been tried, been attended with almost universal success, whether in the early or later stages of the disease.

Although one may have some idea of the *rationale* of the treatment by ergot, it would, I think, be premature at present to attempt any definite conclusions.

I am, sir, yours respectfully,

T. BRIGGS, F.R.C.V.S.

Bury, Lancashire, *May 12th*, 1879.

POISONING BY EATING PUTRID FISH.

To the Editor of the VETERINARY JOURNAL.

ALPHAMSTONE.

CAUTION TO FARMERS.—Mr. Chas. Tokely, of this parish, writes to us. I recently carted a waggon-load of sprats into the farm-yard to let them stand on the waggon that the droppings might go into the litter beneath. This was done at midday on Monday, 30th Dec., 1878. At the time there was two capital cart colts in the yard, valued at about £40 each. On the following (Tuesday) night the man whose duty it was to see after them did not notice anything was the matter with them at ten o'clock, but at half-past four in the morning he found one of the colts dead in the yard and the other one very ill. The latter, under Mr. Godbold's (veterinary surgeon, Sudbury) treatment, is in a fair way of recovery. Mr. Godbold is of opinion that the colts ate some of the putrid fish, which poisoned them. If this is made known to the public, it may act as a caution, and prevent other mishaps.

DEAR SIR,—The above was published in the *Suffolk and Essex Free Press*. Do you think the colts would eat the fish?—Yours faithfully,

Topplesfield, Essex. CHARLES MARKING, V.S.

[We have had no experience of horses eating fish in this country, but it is a fact that in Iceland horses, cattle and dogs live to a certain extent on this food, which they greedily devour.]

OFFICIAL PARTIALITY.

To the Editor of the VETERINARY JOURNAL.

SIR,—I approach the subject which I have headed as above with the greatest reluctance, and nothing but a sense of the duty I owe to the profession, and my anxiety for its welfare, impels me to allude to it. As I understand it, the position of the President and Members of Council of the Royal College of Veterinary Surgeons should be one of absolute impartiality towards all the teaching schools affiliated to it, and their neutrality in all inter-scholastic rivalries and contentions should be rigidly observed.

With the schools they should not interfere in such a way as to countenance or support one more than another, remembering always—as you have yourself well expressed it—that the schools exist for the profession, not the profession for the schools; and also that undue partiality to any one school is certain to cause ill-feeling and generate a sense of injustice not only in the others, but in the profession. It is well known that in Scotland there are three competing schools, and two of these are in one city—Edinburgh, one founded and endowed by the late Professor Dick, the other recently established in opposition to it by an *alumnus* of the Dick School, who at one time professed great veneration for the memory of the distinguished and worthy Professor.

Whether by accident or otherwise, the new opposition establishment in the Scottish capital has received most marked favour and distinction by the much-respected gentleman who has held the office of President of the Royal College for the past three years, and who has lent all the weight and influence of his official position to aggrandize the said establishment and its Principal, at the expense of the old school and its professors, if not also at the expense of the Glasgow school, which has, I believe, been only favoured once with his presence, the Dick School not at all. I yield to no one in the profession in my respect for the President of the Royal College, nor in my gratitude to him for what he has done in the way of promoting the interests of Veterinary Medicine in this country; but I, nevertheless, do think that his intense admiration and demonstrative partiality for a particular school, which certainly has not yet deserved anything like the praise he so abundantly lavishes upon it and its Principal, might have been restrained somewhat, or kept in abeyance while he held the Presidential chair, from which all schools expect equal justice and favour.

If the school in question is all that is said of by its partisans, it surely does not require the energetic bolstering it has received during the last three years from this quarter. In any case, I and very many others do not think it adds to the dignity or reputation of the office of President to make such invidious and unfair distinctions, and it is earnestly to be hoped that future Presidents will not make such a mistake, but maintain the office as pure and unsullied in its character for impartiality and fairness as such an office should bear. The other schools in Scotland have done nothing to deserve disfavour that I am aware of, and their Principals have undoubtedly at least as much claim to *blue ribbons* for the scientific and moral reputation they have earned as those of any other school. The Principals of the Glasgow and Dick schools have done as much as any others in their educational and scientific duties, and the *moral* reputation of the profession has been also carefully guarded by them as its representatives in Scotland. It sounds like mockery, or something worse, to profess veneration for the memory of Professor Dick, and at the same time to start an opposition school (which was not needed) to undermine and destroy that which he earnestly laboured all his life to

establish and endow. He was an honest man; would that others were like him.

The Members of Council who come to Scotland as Examiners have the good taste, I am happy to observe, to maintain their position of neutrality and impartiality when in Edinburgh, and appear ready to sacrifice whatever private partiality they may have, in the interests of their profession and their duty. Let us hope that future Presidents may imitate them so long as there are rival schools, and "a fair field and no favour" exists as a British maxim. Apologising for the length of this letter, which I earnestly beg of you, in the interests of justice to publish,

I remain, yours truly,

"CLYDE STREET."

CORRECTIONS AND COMMENTS.

THE following correction in Mr. Almond's paper on "Visceral Inflammation," which appeared in our last issue, is requested. At page 319, five lines from bottom, instead of "and to this extra pressure is due," etc., insert "which extra pressure is due," etc.

THE name of the gentleman first in the list of graduates from the Edinburgh New College is not Semple, as on p. 369, but Temple.

A PLACARD has been forwarded to us for comments. It is issued by a member of the profession in one of the Midland Counties, who appends to his name M.R.C.V.S., and contains a list of the horse and cattle medicine he vends—such as "Gripe Mixtures," "Tonic Drenches for Cattle," "Cleansing Drenches," "Foot Rot Mixtures," "Thriving Powders for Sheep—a Preventative (!) of Rot." We are informed that this placard is generally circulated, and is posted in Inn Yards throughout the district. As the issuer of these placards only graduated (from a Scotch school) in 1877, he may not know that he is injuring the reputation of his profession by having recourse to such a method of conducting business. A hint of this may be sufficient.

THE appointment of a Veterinary Inspector for the county of Merionethshire, under the "Contagious Diseases Animals Act, 1878," was considered on April 8th, and the Clerk of the Peace stated that he had only received two applications to the advertisement which he had inserted in the papers by order of the Court at the last Quarter Sessions—one being from Mr. Richard Wynne Williams, chemist, Dolgelley, and the other from Mr. R. Roberts, veterinary surgeon, M.R.C.V.S., Wrexham. Mr. Roberts had also written a letter, which he said might be read by any member of the Court, but was not to be published.

Mr. POPE asked whether it was imperative under the Act that the inspector should be an M.R.C.V.S.

The CLERK stated that it so stated in the Act, but that an order in Council was afterwards issued by which a person otherwise then a member of the Veterinary College might be engaged, when there was a difficulty in finding one.

Mr. VAUGHAN, Mr. REVELEY, and others mentioned that Mr. R. W. Williams had acted as inspector in the Dolgelley district before to the satisfaction of the Local Authority.

Mr. POPE said that the terms quoted by Mr. Roberts were exceedingly vague, and contained so many exceptions that it would be difficult to know what his charges would be, while those of Mr. Williams were very plain, and he would propose that Mr. R. W. Williams be appointed for at least six months—his further appointment to be subject to the approval of the Court.

Mr. HOLLAND seconded, and it was carried unanimously.

[We commend this notice to the Veterinary Department of the Privy Council, which is responsible for the sad state of affairs exemplified in the above report, and which shelters itself under the flimsy plea that there are not veterinary surgeons in some localities to appoint as inspectors. Of course this plea is unfounded, and the so-called Veterinary Department gives its hearty support to imposture and empiricism in its most barefaced and dangerous form—the substitution of chemists, druggists, and in fact anyone who has the audacity to pretend to a knowledge of contagious diseases in animals, for qualified members of the veterinary profession. This is not only an injustice to the latter and an encouragement to imposture, but it is an abuse and a source of danger and loss to the public.]

Communications, Books, Journals, etc., Received.

COMMUNICATIONS have been received from R. Roberts, Wrexham; R. J. Rutherford, Edinburgh; Captain M. H. Hayes, Meerut; J. Mills, Royal Horse Artillery, Edinburgh; Professor A. Smith, Toronto; C. Marking, Essex; R. Ward, London; Professor McCall, Glasgow; "Artemus Secundus;" T. H. Merrick, Kettering; A. E. Macgillivray, Banff; T. Moore, London; T. Greaves, Manchester; T. Briggs, Bury; "Fiat justitia, ruat cœlum;" R. Poyser, Carabineers, India; "Clyde Street;" "A Periodical Martyr;" R. W. Matthews, Belfast; E. S. Bates, New York; N. Almond, London, W. Broughton, Leeds.

BOOKS AND PAMPHLETS: *C. H. Hertwig*, Taschenbuch der Gesammten Pferdekunde; *G. Pini e Prof. N. Lanzillotti*, Dizionario dei Termini Antichi e Moderni delle Scienze Mediche e Veterinarie; *E. Dele*, Importation des Salaison a Anvers; *P. Gunther*, Beiträge zum Situs des Rindes; *L. V. Tellor*, The Diseases of Live Stock; *T. Walley*, The Four Bovine Scourges; *W. Fearnley*, Lessons in Horse Judging.

JOURNALS, ETC.: *Wochenschrift für Thierheilkunde und Viehzucht; North British Agriculturist; Index Medicus; Beilage zu den Veröffentlichungen des Kaiserlich Deutschen Gesundheitsamtes* (2 Copies); *Archives Vêtérinaire; Recueil de Méd. Vêtérinaire; American Veterinary Review; Archiv für Wissenschaftliche und Praetische Thierheilkunde; Annales de Méd. Vêtérinaire de Bruxelles; Der Thierarzt; Athenæum; Melbourne Chemist and Druggist* (2 Copies); *Journal of the National Agricultural Society of Victoria; Repertorium der Thierheilkunde.*

NEWSPAPERS: *Toronto Globe; Edinburgh Courant; Glasgow Herald; Cambrian News; Philadelphia Public Ledger; Scotsman; Daily Chronicle; Melbourne Argus; Hereford Journal; Yarmouth Independent; Turf, Field and Farm.*

All Communications, Books for Review, Advertisements, etc., must be addressed to the Publisher, 20, King William Street, Strand, W.C.

Morbid Specimens are to be forwarded, addressed to the Editor, VETERINARY JOURNAL, Brown Institution, Wandsworth Road, London.

Communications must be accompanied by the name of the writer, whether he may desire to have it published or not. Anonymous letters and articles cannot be inserted. The Editor does not hold himself identified with the views or opinions expressed by Contributors. Communications for insertion in the next number must arrive on or before the 15th of the present month.

LIBRARY OF THE
STATE AGRICULT'L COLLEGE
FORT COLLINS, COLO.

l, which
ort, and
surgeons
ded, and
ure and
hemists,
ledge of
ofession.
ture, but

Ruther-
se Artil-
Ward,
Merrick,
s, Man-
Carabi-
tthews,
Leeds.

kunde;
ni delle
Anvers;
of Live
Horse

British
iserlich
ueil de
aftliche
; Der
Journal
lkunde.

mbrian
lbourne
n.

lressed

INARY

e may
serted.
ed by
on or

LEGE